

# COMPARATIVE GRAMMAR.



A COMPENDIUM  
OF THE  
COMPARATIVE GRAMMAR  
OF THE  
DO-EUROPEAN, SANSKRIT, GREEK AND LATIN  
LANGUAGES.

BY  
AUGUST SCHLEICHER.

TRANSLATED FROM THE THIRD GERMAN EDITION  
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PART I.



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## TRANSLATOR'S PREFACE.

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THIS book is a translation of those parts of Schleicher's 'Compendium der vergleichenden Grammatik der Indogermanischen sprachen' which treat directly of the Indo-European original language, Sanskrit, Greek, and Latin: it was undertaken for the use of students of Greek and Latin Philology, on the suggestion of Mr. Peile, M.A., of Christ's College, Cambridge, to whom I am indebted for several hints and corrections. My thanks are due to Herr Gustav Voigt also, for help kindly given.

I shall be glad if readers will point out any mistakes in the translation.

HERBERT BENDALL.

LIVERPOOL COLLEGE,  
Oct. 1874.



## PREFACE TO THE FIRST EDITION.

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THIS work is meant to be an elementary handbook for lectures and self-instruction. The want of such a work has been hitherto widely felt. The state of Indo-European Philology is now such that it has become possible to write a compendium of the comparative grammar of the Indo-European languages. After we have discarded that part which is still doubtful, there remains a large store of knowledge, embracing the different sides which language offers to scientific treatment: this knowledge will, in my opinion, stand unshaken for all time. The chief object of a compendium of the Indo-European languages is to collect and arrange in a short and appropriate form, and yet in an intelligible manner, these results of Indo-European Philology. Where, however, it is impossible to avoid mentioning what is obscure and doubtful, it will be expressly characterized as such.

It is no slight task to compose a first handbook of this kind treating of the formation of the Indo-European languages: whether the writer of the present work has succeeded in temporarily satisfying the want, others must decide; but he begs them to take it into consideration that his book is a first essay in the direction pointed out.

The following account of the origin of my book may to some extent at least show that I have honestly encountered the difficulties of the task.

I have been Academical Professor for fifteen years, and have lectured on Indo-European grammar from the outset; partly sketching out grammars of particular Indo-European languages, from a philological point of view, partly writing a grammar of the languages which collectively form a speech-stem, *i.e.* a so-called Comparative Grammar. To infer from the number of hearers whom even these latter lectures attracted, and from the perseverance and attention with which I was listened to, they must have treated the subject in a manner intelligible to beginners. I have remodelled my notes more than once. It was a real pleasure to work for my hearers and pupils here: I am indebted to their encouragement and participation for the heartiness with which I undertook the complete re-arrangement of my treatise on Comparative Grammar of Indo-European languages, which I had delivered in two sets of half-yearly lectures.

In these lectures on Indo-European grammar I felt the want of a printed elementary treatise, which should offer in the most appropriate way the necessary examples and comparative tables. Dictating, and continually writing on the black board, is wearisome both to hearers and to the lecturer. Hence the thought first occurred to me of having my paper multiplied in MS. for the use of my pupils. And from this arose by degrees what I have now completed, the composition

of a compendium especially for beginners. This book is therefore my notes repeatedly revised, and this is the point of view from which I desire it to be used and criticized.

It is to be understood that in my lectures I did not confine myself to the matter in the notes; what is printed here is merely that part which I used to dictate. Enlargements on particular points and excursus by the way I have never denied myself. Those who make use of this compendium will perhaps take this into consideration. The attempt to reduce the compass of the book to the narrowest limits possible made it a necessity to banish from it all discussions as regards different views. Generally I have attempted, whenever I could, to arrange the facts in such a way that they carried their proofs with them: moreover, the materials are so copious that even in the lectures it is difficult to find time for a controversial statement of details.

Circumstances unfortunately compelled me to finish the last preparation of the MS. for a printed compendium in a short time: but I hope that I have nevertheless written a useful book.

The design and execution of my work must speak for themselves; to discuss these points here would occupy too much space, and lengthen the compass of the preface to excess.

AUGUST SCHLEICHER.

JENA, *September*, 1861.

## ABBREVIATIONS.

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A.S.	Anglo-Saxon	mom.	momentary
acc. to	according to	N.H.G.	New High German
bef.	before	O.Bulg.	Old Bulgarian
bes.	beside	O.H.G.	Old High German
betw.	between	origl.	original Indo-European
caus.	causative		language
comb.	combination	partt.	particles
dial.	dialect	Pol.	Polish
diall.	dialects	✓	root
ex.	example	Scl.	Slavonic
exx.	examples	sf.	suffix
f.f.	fundamental form	sff.	suffixes
fm.	form	st.	stem
fmn.	formation	stt.	stems
inserr.	inscriptions	termn.	termination
M.H.G.	Middle High German.	unacc.	unaccentuate

Asterisk \* indicates that the form does not occur.

The other abbreviations explain themselves.

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# ERRATA.

PAG.	LINE.		
10, 11, 12	head	for Origl. language-vowels	read Origl.-language: Vowels.
17	9	for part. perf. pass.	read past part. pass.
18	14	for pf. part.	read „ „ „
25	3	for sub.	read post.
34	13	for τους	read τόνς.
35	1	for κίρνημι	read κίρνημι.
36	34	for μήτερ-	read μητέρ-.
39	22	for μήτερ-	read μητέρ-.
47	21	for σέομαι, σγομαι	read -σεομαι, -σγομαι.
48	33	for ~	read ῑ.
54	7	for Old. Lat.	read Old Lat.
ead.	28	for Indo-Germ.	read Indo-Eur.
59	9	for uouos	read nouos.
61	1	for dico	read dico.
ead.	10	for and	read cf.
64	17	for Sk.	read Gk.
71	4	for φερωντς	read *φεροντς.
72	last	for final ὀ . . . origl. ὤ	read final ὤ . . . origl. ὀ.
78	16	for πυνζάνομαι	read πυνθάνομαι.
100	3	for ab.	read Zend.
104	last but one	for νεφελη	read νεφέλη.
115	28	for μήτερ	read μητέρ-
118	last but one	for ήττων	read ήττων.
133	last but one	for δαήρ-	read δαήρ.
148	19	for στιχω	read στιζω.

## INTRODUCTION.

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I. Grammar forms one part of the science of language: this science is itself a part of the natural history of Man. Its method is in substance that of natural science generally; it consists in accurate investigation of our object and in conclusions founded upon that investigation. One of the chief problems of the science of language is the inquiry into, and description of the classes of languages or speech-stems, that is, of the languages which are derived from one and the same original tongue, and the arrangement of these classes according to a natural system. In proportion to the remainder but few speech-stems have hitherto been accurately investigated, so that the solution of this chief problem of the science must be looked for only in the future.

By grammar we mean the scientific comprehension and explanation of the sound, the form, the function of words and their parts, and the construction of sentences. Grammar therefore treats of the knowledge of sounds, or Phonology; of forms, or Morphology; of functions, or the science of meaning and relation, and syntax. The subject of grammar may be language in general, or one particular language or group of languages; grammar may be universal or special: it will in most cases be concerned in explaining the language as a product of growth, and will thus have to investigate and lay down the development of the language according to its laws. This is its exclusive province, and therefore its subject is the laying-down of the 'life of the language,' generally called historical grammar, or history of language, but more correctly 'science of the life of

a language' (of sound, form, function, and sentence), and this again may be likewise as well general as more or less special.

The grammar of the Indo-European languages is therefore a special grammar: because it treats of these languages as products of growth, and exhibits their earlier and earliest gradations, and would therefore be more accurately called a special historical grammar of Indo-European languages.

*Note 1.*—By comparative grammar is meant not that grammar which is merely descriptive, but that which throws light on speech-forms as far as possible, because as a rule it is not confined to the treatment of any one particular language.

*Note 2.*—The following work embraces only two parts, viz. scientific treatment of sounds and of forms. Indo-European function and sentence-formation we are not at present in a position to handle in the same way as in the case of the more external and intelligible branches—sounds and forms.

II. To assume one original universal language is impossible; there are rather many original languages: this is a certain result obtained by the comparative treatment of the languages of the world which have lived till now. Since languages are continually dying out, whilst no new ones practically arise, there must have been originally many more languages than at present. The number of original languages was therefore certainly far larger than has been supposed from the still-existing languages. The easiest preliminary distribution of languages which we can make is suggested by their morphological constitution.

There are—

1. Languages which are simply composed of invariable disjointed meaning-sounds, *Monosyllabic*, e.g. Chinese, Annamese, Siamese, Burmese. Such sounds we denote by *R* (radix). The Indo-European language would be in this stage of development when the word *ai-mi* (I go, εἶμι) was sounded not so, but as *i* or *i ma* (formula *R*, or *R+r*).

2. Languages which can link to these invariable sounds sounds of relation, either before, or after, or in the middle, or

in more than one place at once [denoted here as *s*. (suffix), *p*. (prefix), *i*. (infix)]. These are Confixative languages, e.g. Finnish, Tatar, Dekhan, Basque, the languages of the aborigines of the New World, of South Africa (Bantu), and most languages in fact. In this step of development the word *ai-mi* would be *i-ma* or *i-mi*.

3. Languages which for the purpose of expressing relation can regularly vary their roots as well as their confixes (which have sprung from independent original roots), and can at the same time preserve intact the means of compounding. These are Inflexive languages. Such a root as is regularly varied for the end of expressing relation is here denoted by  $R^x$  ( $R^1$ ,  $R^2$ , etc.), a similar suffix by  $s^x$ .

Hitherto we have become acquainted with only two speech-stems of this class, the Semitic and the Indo-European. The latter has for all words only one formula, viz.  $R^x s^x$  ( $s^x$  meaning one or more than one regularly variable suffix), and consequently a regularly variable root with a regularly variable expression of relation at the end of the suffix, e.g. *ai-mi*,  $\epsilon\dot{\iota}\mu$ ,  $\sqrt{i}$ .

The Indo-European is therefore a suffix-language, together with the neighbouring languages of the Finnish stem, including Tataric, (Turkish) Mongolian, Tungusian, Samoiedish, as also with the Dravidian (Dekhan)—all included in the formula *Rs*.

*Note 1.*—The Semitic, which is not akin to the Indo-European, has more word-forms, namely  $R^x$  and  $pR^x$ , forms quite strange to Indo-European, which has only one. Besides, its vowel-system is perfectly distinct from the Indo-European, not to mention other marked differences. Cf. Aug. Schleicher, 'Semitisch und Indogermanisch' in Beitr. ii. 236–244. An attempt to deduce the fundamental language of the Semitic speech-stem has been made by Justus Olshausen in his lehrbuche der hebräischen sprache, Brunswick, 1862.

*Note 2.*—The augment in Indo-European is no relation-affix, no prefix, but an adherent, though originally independent word, which may moreover be omitted.

III. The life of a language (generally called its 'history') falls under two heads—

1. *Development in prehistoric times.* As man has developed, so also has his language, *i.e.* the expression of his thoughts by sounds: even the simplest language is the product of a gradual growth: all higher forms of language have come out of simpler ones, the *Confixative* out of the *Monosyllabic*, the *Inflexive* out of the *Confixative*.

2. *Decline in the historic period.* Language declines both in sound and in form, and in its decay changes of meaning take place alike in function and construction of sentences. The transition from the first to the second period is one of slower progress. To investigate the laws by which languages change during their life is a most important problem in the science of language, for unless we are acquainted with them we cannot possibly understand the languages in question, especially those which are still living.

Through different developments, at different points in the province of one and the same language, the self-same tongue branches out into the ramifications of the second period (whose beginning however is likewise earlier than the origin of historic tradition), and diverges into several languages (dialects): this process of differentiation may repeat itself more than once.

All these changes took place gradually and at long intervals in the life of the language, since generally all changes in language unfold themselves gradually.

The languages which spring immediately from an original language we call *fundamental*; almost every *fundamental-language* has split up into languages; all these last-named languages may further branch into *dialects*; and these *dialects* into *sub-dialects*.

All the languages which are derived from one original-language form together a class of speech or *speech-stem*;



these again are sub-divided into families or branches of speech.

IV. The name of Indo-European has been given to a distinct set of languages belonging to the Asiatico-European division of the earth, and of a constitution so consistent internally, and so different from all other languages, that it is clearly and undoubtedly derived from one common original language.

Within this Indo-European class of speech however certain languages geographically allied point themselves out as more closely related to one another: thus the Indo-European speech-system falls into three groups or divisions.

These are:

1. The Asiatic or Aryan division, comprising the Indian, Iranian (or more correctly Eranian), families of speech, very closely allied to one another. The oldest representative and fundamental-language of the Indo-European family, and generally the oldest known Indo-European language, is the Old-Indian, the language of the oldest portion of the Vêdas; later on, after it had become fixed in a more simplified form, and subject to certain rules, as a correct written language, in opposition to the peoples' dialects, called Sanskrit. We are not acquainted with Eranian in its original form: the oldest known languages of this stem are the Old-Bactrian or Zend (the Eastern), and the Old-Persian, the language of the Achaimenid cuneiform inscriptions (the western). To this family besides is related the Armenian, which we know only from a later date, and which must have branched off even in early times from the Eranian fundamental-language.

2. The south-west European division, composed of the Greek, next to which we must perhaps place the Albanian, preserved to us only in a later form; Italian (the oldest known forms of this language are the Latin,—especially important for us is the Old-Latin, as it was before the in-

roduction of the correct literary language formed under Greek influence,—the Umbrian and the Oscan), Keltic, of which family the best known, though already highly decomposed, language is the Old-Irish, Erse dating from 700 A.D. Italian and Keltic have more in common with one another than with the Greek.

3. The North-European division, composed of the Slavonic family with its closely-allied Lithuanian,—the most important language for us of this group,—and the German, widely separated from both. The oldest forms of this division are the Old-Bulgarian (Old Church-Slavonic in MSS. dating from 1100 A.D.): the Lithuanian (and of course the High-Lithuanian, South-Lithuanian, Prussian Lithuanian), first known to us 300 years ago, but clearly of far greater antiquity, and the Gothic from the fourth century. Beside the Gothic, however, are the oldest representatives of German and Norse, Old-High-German, and Old-Norse, which we may bring forward when they present earlier forms than Gothic.

The greatest number of archaic particulars in point of sounds and construction of language is found in the Asiatic division, and within it, in the Old-Indian; next in point of archaicisms (*i.e.* preservation of similarity to the original language, by having fewer strongly-developed and peculiar forms) comes the S.W.-division, in which Greek is found to be most faithful; and lastly the N.-European group, which, if regarded as a whole, may be shown to have the most characteristic development, and to be the least faithful to the original language.

By combining these facts with the above-named relationships of the Indo-European languages, and drawing inferences as to the process of separation of the Indo-European body of language in ancient times, we get the following result: The Indo-European original language differentiates first, through unequal development in different parts where it prevailed, into

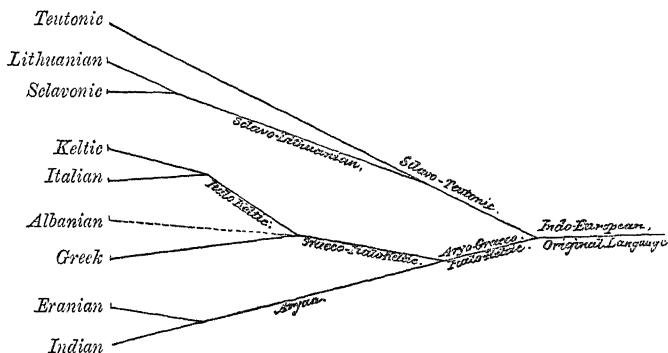
two fundamental-languages, viz. the Slavo-Teutonic, which afterwards divided itself into Teutonic and Slavo-Lithuanian, and the Aryo-Graeco-Italo-Keltic, the remaining portion of the Indo-European language, which divided itself into Graeco-Italo-Keltic and Aryan; and the Graeco-Italo-Keltic soon split up into Greek and Italo-Keltic, while the first, the Aryan, remained undivided for some time. Later still the Slavo-Lithuanian, the Aryan (Indo-Eranian) and Italo-Keltic, further divided themselves. It may be that at most or at all of the divisions there arose more languages than we now know of, since probably many Indo-European languages have died out through lapse of time. The further eastward an Indo-European people lives, the more archaicisms are found in its language: the further westward they have gone, the fewer archaicisms, and the more numerous new-formations are found in the language. From these and other indications we infer that the Slavo-Teutonic race first began its wanderings westwards; next followed the Graeco-Italo-Keltic; and of the Aryans who remained behind, the Indians journeyed south-eastward, the Eranians south-westward. The home of the Indo-European original race must be sought in the highlands of Central Asia.

It is only of the Indians, who were the last to leave the parent stem, that it is quite certain that they expelled an aboriginal race from their later dwelling-place, a race of whose language much passed into their own: a similar process is highly probable in the case of many other Indo-European peoples.

The most ancient divisions of the Indo-European, up to the origin of the fundamental languages belonging to the families of speech formed from the speech-stem, may be seen in the following table (see next page). The length of the lines shows the duration of the periods, their distances from one another, the degrees of relationship.

*Note.*—In the present work an attempt is made to set forth the inferred Indo-European original language side by side with its really existent derived languages. Besides the advantages offered by such a plan, in setting immediately before the eyes of the student the final results of the investigation in a more concrete form, and thereby rendering easier his insight into the nature of particular Indo-European languages, there is, I think, another of no less importance gained by it, namely that it shows the baselessness of the assumption that the non-Indian Indo-European languages were derived from Old-Indian (Sanskrit), an assumption which has not yet entirely disappeared. This view has found supporters up to the present date, especially as regards Old-Baktrian (Zend). The term ‘Sanskritist,’ not seldom applied to Indo-European philologists (meaning that we concede to Sanskrit a position which it does not deserve by deriving other languages from Sanskrit, or explaining them by it, instead of studying them fundamentally), is likewise shown to be quite inapplicable by the plan employed in the Compendium. The disadvantage of having in certain cases Indo-European original forms inferred which are more or less doubtful, does not weigh at all against the advantages which, according to our view, are attained by the arrangement of the subject used hereafter.

A form traced back to the sound-grade of the Indo-European original language, we call a fundamental-form [f.f.] (*e.g.* Lat. *generis*, f.f. *ganasas*; Gk. γένους, f.f. *ganasas*). Hence it is only when forms of different sound-grades are brought to one and the same sound-grade, that we can compare them with one another. When we bring forward these fundamental-forms, we do not assert that they really were once in existence.



# GRAMMAR.

## PHONOLOGY.

### A. VOWELS.

#### INDO-EUROPEAN ORIGINAL-LANGUAGE.

§ 1.

Since in the citation of examples we make use not only of vowels but also of consonants, before we treat of the vowels we proceed to set forth a table of the speech-sounds collectively, arranged according to the physiology of sound, followed by the necessary remarks upon pronunciation, etc.

TABLE OF THE SOUNDS OF THE INDO-EUROPEAN ORIGINAL LANGUAGE,  
i.e. those sounds from which arose the sounds of the different Indo-European languages, according to the laws of sound-change which come into play during the life of a language, and to which accordingly, they may be traced as to a common source.

CONSONANTS.						VOWELS.	
MOMENTARY SOUNDS.			PROLONGED SOUNDS.				
	UNASPIRATED. mute	ASPIRATED. sonant	SPIRANTS. mute	NASALS. sonant	r-SOUND. sonant		
Gutt.	<i>k</i>	<i>g</i>				<i>a</i>	} <i>aa, āa</i> <i>ai, āi</i>
Pal.			<i>y</i>			<i>i</i>	
Ling.					<i>r</i>		} <i>au, āu</i>
Dent.	<i>t</i>	<i>d</i>	<i>s</i>	<i>n</i>			
Lab.	<i>p</i>	<i>b</i>	<i>v</i>	<i>m</i>		<i>u</i>	

§ 1. *Note 1.*—The three aspirates and the vowel-diphthongs with  $\bar{a}$  (thus  $\bar{a}a$ ,  $\bar{a}i$ ,  $\bar{a}u$ ) probably were wanting at an earlier period in the life of the Indo-European original language; in the most archaic state of the language, while it was yet uninflected, all the vowel-diphthongs were absent.

Thus the Indo-European original language probably possessed six momentary sounds, viz. three mutes, and three sonants; six consonantal prolonged sounds, viz. three spirants, and three so-called liquids, *i.e.* the two nasals  $n$ ,  $m$ , and  $r$  ( $l$  is a secondary offshoot of  $r$ ), and six vowels. At a later period, shortly before the first separation, there were nine momentary, and nine vowel-sounds. We must not overlook the numerical proportion belonging to the number of sounds.

*Note 2.*—Sonants (or medials) are those consonants in whose production the glottis gives a simultaneous sound: this is the case with all nasals and  $r$ - and  $l$ -sounds, whilst the momentary consonants and spirants can be pronounced with or without the accompaniment of the vocal-sound. Sonants thus have something of the vowel in their composition. The aspirates are double sounds; both sounds of which they consist, the preceding momentary consonant and the subsequent aspiration, must be heard in pronunciation.

*Note 3.*—The momentary consonant which precedes the pronunciation of an initial vowel—the so-called spiritus lenis, the aleph or hamza of the Semitic,—which is formed by the sudden separation of the vocal chords, should properly be represented here and in the other languages in the tables, and expressed by a special character (perhaps, after Gk. analogy). It is a consonant sound produced in the larynx alone, and must therefore be placed in a laryngeal class of sounds (to which  $h$  also belongs, v. post. § 4). Nevertheless I have ventured to abide by the majority of Indo-European spelling-systems, and to leave this sound uncharacterized.

## § 2. VOWELS OF THE INDO-EUROPEAN LANGUAGE.

Fundamental vowel.	1st Step.	2nd Step.	
1. $a$ -scale $a$	$a + a = aa$	$a + aa = \bar{a}a$	✓
2. $i$ -scale $i$	$a + i = ai$	$a + ai = \bar{a}i$	✓
3. $u$ -scale $u$	$a + u = au$	$a + au = \bar{a}u$	✓

*Note 1.*—The second step occurs in the Asiatic, South-European, and North-European divisions of the Indo-European languages, and therefore in all probability traces its existence

from the original language, though the separate languages often § 2. disagree in its use.

*Note 2.*—*aa* and *āa* were perhaps even in early times both compressed into *ā*. But at the same time the two *ās* which thus arose are distinguished from one another, *e.g.* in Greek and Gothic *ā* of the 1st is distinguished from *ā* of the 2nd step. Notwithstanding that the earliest Indian and the Zend seem to bear evidence against the contraction of both *as*, we have placed throughout hereafter an *ā* for *aa* and *āa* in original Indo-European words, chiefly because it would be impossible to distinguish always between a 1st and a 2nd step-form.

*a*, the commonest vowel, constitutes a class by itself; *i* and *u* are by nature very similar, and are fundamentally different from *a*. *i* and *u* have the consonants *y* and *v* as collateral relations, and frequently as representatives, whilst *a* cannot pass into any consonantal sound, and has therefore the vowel-nature in a higher degree than the more consonantal sounds *i* and *u*. *a* is by far the most frequent vowel in the Indo-European language, occurring more often than *i* and *u* taken together.

Each vowel can move in its own scale only: this takes place in the root itself for the purpose of expressing relation: the vowels in stem-formative and word-formative suffixes likewise are capable of step-formation, since these suffixes themselves have arisen from roots originally independent. The fundamental-form of the root is always to be cited with the fundamental vowel. Before two consonants the step-formation does not take place; the fundamental vowel *a* (never *i* or *u*) is found in all roots which end in two consonants.

The essence of inflexion depends upon the vowel-system.

Vowel-lengthening must not be conceded to the original language as being of secondary origin.

*Note.*—Even where the correspondence between different Indo-European languages seems to point to a greater antiquity in the lengthening (*e.g.* in many nom. sing. as Sk. *pitār(s)*, Gk. *πατήρ*, Old-Lat. *palēr*, Goth. *fadar*, i.e. *\*fathār*; Sk. *dúrmanās*, Gk. *δυσμενής*; Sk. *āgmā*, Gk. *ποιμήν*, Lith. *akmū*, Lat. *homō*,

§ 2. Goth. *guma*, i.e. \**gumā*) we believe that we see an unoriginal phenomenon, which suitably to the nature of the case did not become developed in the different Indo-European languages till after their separation from the original language (not unfrequently the conformity is wanting even in this particular, cf. Sk. *bhāran*, Gr. *φέρων*, Lat. *ferens*, Goth. *bairands*, Slav. *bery*). In the original language we can cite here only the pure fundamental forms, i.e. the word preserved perfectly intact as regards all its parts (thus, e.g. *patars*, *dusmanass*, *akmans*).

#### EXAMPLES.

##### 1. *a*-scale.

*vak-mi* (1 sg. pres.), *√vak* (speak), *va-vāk-ma* (1 sg. pf.), *vāk-s* (uox); *bhar-āmi*, *ba-bhar-mi* (I bear), *bhar-ta-s* (borne), *√bhar* (bear), *ba-bhār-ta* (3 sg. pf.), *bhār-a-s* (burden), *bhār-aya-ti* (3 sg. pres. caus. vb.; *φορεῖ*); *da-ta-s*, *da-tā* (datus, data), *√da* (give), *da-dā-mi* (1 sg. pres.); *dha-ta-s*, *dha-tā* (past part. pass. n. sg. m. f.), *√dha* (set), *da-dhā-mi* (1 sg. pres.), etc.

##### 2. *i*-scale.

*i-masi* (1 pl. pres.), *√i* (go), *ai-mi* (I go); *vid-masi* (1 pl. pres.), *√vid* (see, know), *vid-mi* (I see), *vid-aya-ti* (3 sg. pres. caus. vb.), *vi-vāid-ma* (pf.); *√div* (shine), *div-am* (acc. sg. word-st. *div*, light, bright sky, *Ζεύς*), *daiv-a-s* (shining, diuos, deus), etc.

##### 3. *u*-scale.

*bhug-na-s* (past part. pass.), *a-bhug-am* (1 sg. aor.), *√bhug* (bend), *bhaug-āmi* (1 sg. pres.) *bu-bhāug-ma* (1 sg. pf.); *yug-a-m* (iugum), *yug-ta-s* (iunctus), *√yug* (iungere), *yu-yāug-ma* (1 sg. pf.), etc.

*Note.*—The agreement of Greek and Gothic proves the 2nd step in pf.; *πέφυγα* gives no evidence against the 2nd step, but is a Graecism for \**πέφουγα*; cf. forms like *λέ-λοιπ-α*, *√λιπ*, which therefore would lead us to expect *ou* here, because *eu* corresponds to *ev*; v. sub Greek vowel-system.

#### § 3.

#### VOWEL SOUND-LAWS

(i.e. influence of vowels and consonants on vowels) were not existent in the original Indo-European language.

A meeting of several vowels occurs but seldom, since hitherto



no consonants have been elided, and prepositions, like separable § 3. adverbs, stand before their verb. Nevertheless, if two vowels do come into contact with one another in consequence of word-formation, hiatus perhaps occurred in the most original state of the language; in early time, however, *a* may have become fused with following vowels: thus probably *i* (and *u*, but examples are wanting) after *a* becomes combined with it into a diphthong, in cases like *bharait* (3 sg. opt.),  $\sqrt{bhar}$  (bear), pres. st. *bhara-*, *i* is the sign of the opt.; the opt.-st. is thus *bharai-*, *t*=sf. of 3 sg. But the sequence of two vowels, of which the former is *i* or *u*, will not be considered as a hiatus, e.g. *i* and *u* (so also *ai*, *āi*, *au*, *āu*) remain unchanged before other vowels, as *i-anti* (3 pl. pres.  $\sqrt{i}$ , go), *ku-kru-anti* (3 pl. pf.) *krau-as* (neut. the hearing,  $\sqrt{kru}$ , hear).

*Note.*—The earliest Old-Indian points clearly to the non-avoidance of hiatus between *i*, *u* (and the diphthongs which have these vowels as their key-elements), and following vowels. We may nevertheless suppose that *iyanti*, *kukruvanti*, *krauras* were pronounced, *i.e.* that *i* and *u* before vowels split up into *iy*, *uv*, as this pronunciation almost arises from them.

## SANSKRIT.

## TABULAR VIEW OF SANSKRIT SOUNDS.

§ 4.

CONSONANTS.								VOWELS.		
MOMENTARY.				PROLONGED.						
	UNASPIRATED.		ASPIRATED.		SPIRANTS.		NASALS. r- & l-SOUND.			
	mute	sonant	mute	sonant	mute	sonant	sonant	sonant		
Gutt.	<i>k</i>	<i>g</i>	<i>kh</i>	<i>gh</i>	ṣ	h	ṇ		<i>a ā</i>	} <i>e āi</i>
Pal.	<i>ṭ</i>	<i>ḍ</i>	<i>ṭh</i>	<i>ḍh</i>	ṣ	<i>y(j)</i>	ṇ		<i>i ī</i>	
Ling.	<i>t</i>	<i>d</i>	<i>th</i>	<i>dh</i>	ś		ṇ	<i>r l</i>	<i>r ṛ l</i>	} <i>ō au</i>
Dent.	<i>t</i>	<i>d</i>	<i>th</i>	<i>dh</i>	s		n			
Lab.	<i>p</i>	<i>b</i>	<i>ph</i>	<i>bh</i>		<i>v</i>	<i>m</i>		<i>u ū</i>	

§ 4. The nasalised pronunciation of vowels (as Fr. *en*, *on*) is indicated by ~ (*ā̃*, *ī̃*, etc.): this pronunciation arises through the change of a following nasal consonant according to sound-laws.

The accented syllable is marked '.

*Note 1.*—If we compare the above table with the table of Indo-European sounds in § 1, we shall find that the sounds collectively existed in the original language likewise (*ē*=original *ai*, *ō*=original *au*), but in addition to them we shall see a number of very similar unoriginal sounds, which have arisen from those original sounds according to the laws of language, and now stand side by side with them.

*Note 2.*—The doctrine of the Sanskrit alphabet belongs to Sanskrit special-grammar, as an appendix to the sound-rules.

*Pronunciation.* Known to us through the Hindu, which is on the whole a very good representative, and by means of the physiology of sounds, and the history of language.

The remarks on the pronunciation of the aspirates in § 1 hold good here also: they are distinct double sounds, and the *h* must be made audible after the momentary sounds.

We are accustomed to pronounce the momentary palatals *ḳ*, *g̣*, *ḳh*, *g̣h*, like *tsch*, *dsch*, or, more accurately, like French *dj*, *tschh*, *djh*, a pronunciation which is correct only for a later state of the language; in the earlier period the correct pronunciation of *ḳ* and *g̣* would be a close blending of *ky*, *gy*—almost like *k*, *g*, in German *kind*, *gieng* (in the case of the aspirates the aspiration is still naturally added). Our pronunciation of these sounds is nevertheless clumsy (especially before other sounds than *i*, *e*), and we therefore willingly abide by the somewhat incorrect traditional pronunciation, *i.e.* momentary dental + lingual spirant.

'Lingual,' for want of a better term, is used for that part of the mouth between the palate and the teeth. The momentary linguals are sounds like *ṭ* and *ḍ*, except that they are produced not by the teeth, but much further back towards the palate:

to effect this the tongue must be bent backwards : these sounds are called by the Hindus ‘*head-sounds*’ (which has been mis-translated ‘*cerebral*’) : in the conventional European pronunciation they are not distinguished from the dentals.

Of the spirants, the exact pronunciation of  $\text{ॐ}$  (a variation fr. *s* acc. to sound-laws) is not known ; it has no equivalent in sound : we pronounce it either as *h* or not at all.

*h* is always audible and equivalent to a sonant, and is therefore like our *h*, but must, however, be sounded emphatically. The *h* is a fricative noise formed in the upper part of the larynx, and belongs (like ‘, § 1, Note 3) to the class of laryngeal consonants. For convenience, here and in the other languages where it makes its appearance, we have placed it amongst ‘*Gutturals*.’ *h* can be produced either with or without vibration of the vocal chords, *i.e.* as a *sonant* or as a *mute*.

$\text{ॐ}$  must be pronounced like *y*, but without its accompanying vocal-sound, and probably somewhat more sharply (with closer contraction of the organ), perhaps like *ch* in *sichel* ; the conventional pronunciation as a sharp *sh* is wrong, and must be avoided ;  $\text{ॐ}$  has nothing in common with *s*.

$\text{ॐ}$  = Germ. *sch*, Fr. *ch*.

*Nasals.*  $\text{ॐ}$  is the guttural nasal, and must therefore be pronounced like Germ. *n* in *enkel*, or *ng* in *lange* ;  $\text{ॐ}$  is the pal. nas., which must have been sounded as a close blending of *ny* (as Fr. *gn* in *campagne*) ;  $\text{ॐ}$ , the head-nasal, takes the place of formative *n*, where  $\text{ॐ}$  or  $\text{ॐ}$  follows : our pronunciation of it is unsuccessful, for we usually confuse it with *n*.

*r* and *l* as vowels are perhaps sounded as in Germ. *hadern*, *handeln*, pronounced with an inaudible *e* as *er*, *el* ; the existence of a strong vowel-sound in vowel *r* is expressly attested by Hindu grammarians (Benfey, Or. und Occ. iii. 25 sqq.).  $\text{ॐ}$  is = long *r*, and should therefore be distinguished from it by a more prolonged pronunciation. Also *r* before consonants was pronounced as a consonant, with a strongly perceptible vibration of

the chords (as in other languages, especially in Zend), which even appears in spelling as a perfect vowel (*a, i*) after *r*. (Benfey, *ib.* p. 32.)

*Note.*—The Bohemian likewise has *r, l*, as vowels; the Slovack dialect has, moreover, the long form of each sound.

### SANSKRIT VOWELS.

Of special importance are the change of *a* to *i, ī*, and *u, ū*, and its total loss (the latter rarely happens in the case of the other vowels). In the latter cases *r* and *l* after consonants form syllables, and count as vowels; *r* is then even capable of being lengthened to *ṛ* (as *i* and *u* to *ī* and *ū*).

Besides short *i* and *u*, Sanskrit has further their unoriginal lengthenings *ī, ū*; *ai* and *au* have been compressed into *ē* and *ō* (through approximation of *a* to *i* and *u*, whereby it became *e* and *o*; and through a further like assimilation of *i* and *u* to *a*, which thus passed into the same vowels *e* and *o*; from *ee, oo* arose *ē, ō*).

Here for the first time we are met by a very important law affecting the life of a language—the law of assimilation (partial and total), and by the no less frequent ‘vowel-weakening,’ a favourite change, especially in the case of *a*. The vowel-scales of the Sanskrit are now therefore as follows:—

	Weakening.	Fund.-vowel.	1st Step.	2nd Step.
1. <i>a</i> -scale	loss; <i>i, u; ī, ū</i> ;	<i>a</i>	<i>ā</i>	<i>ā</i>
2. <i>i</i> -scale		<i>i</i>	<i>ē</i>	<i>āi</i>
3. <i>u</i> -scale		<i>u</i>	<i>ō</i>	<i>āu</i>

*Note.*—The *a*-scale is thus enriched by one member: a negative step-formation (*i.e.* the weakening) has thereby placed itself in a parallel line with the positive.

### EXAMPLES.

#### 1. *a*-scale.

The weakening occurs principally through the influence of the accent; a similar influence is likewise exercised by assimi-

lation to *i*, *u* of the following syllable, or the preceding con-§ 6. sonant has an effect equivalent to this assimilation.

Loss of *a* occurs most frequently before *r*, also after *r*, in which cases *ar* and *ra* followed by a consonant become vowel *r*; in parallel cases *al* becomes vowel *l*, *va*=*u*, *ya*=*i*; loss of *a* is however by no means confined to these instances.

Examples of complete loss of *a* are :

*r*=*ar*; √*bhar* (bear, pres. *bhār-āmi*, φέρω, fero), *bhr-tá-s* (n. sg. masc. part. perf. pass.); √*kar* (make, 3 sg. pres. *kar-ōti*), *krt-á-s* (made), *kā-kr-má* (1 pl. pf.); √*mar* (mori), *mrt-á-s* (mortuos, βροτός=\*μορο-το-ς); st. *mā-tár-* (μητέρ-, mater), *mā-tr'-bhyas* (matribus), *mā-tr'-śu* (μητράσι), etc.

This *r* is subsequently treated acc. to analogy of the other vowels, and thus is also lengthened; e.g. acc. pl. *mā-tr'-s* (matres, μη-τέρ-ας), *dā-tr'-n* (datores, δο-τῆρ-ας), st. *dā-tár-* (dator, δοτήρ).

*l*=*al* occurs only in √*kalp* (3 pres. med. *kálp-a-tē*, keep oneself right, succeed), which stands for original *karp* (v. 'Consonants'), *klp-tá-s* (n. sg. masc. past part. pass.).

*r*=*ra*; √*prkḥ-āti* (3 sg. pres.), √*prakḥ* (pray, cf. Goth. *frah*, Lat. *prec*, e.g. in *prak-śyāti*, 3 sg. fut.); *prth-ú-s* (broad), √*prath* (cf. πλατ-ύ-ς, Lith. *plat-ù-s*), etc.

*Note.*—The Hindu grammarians treat *r*, *l*, as fundamental vowels, *ar*, *al*, as their first step-formations. As a vowel of the first step it is generally=*a* (for it often stands parallel to *ē*, *ō*, also), in the second it is perfectly=*ā*. The first step is called by the Hindu grammarians *guṇā-s* (masc. 'quality'), the second step *vṛddhi-s* (fem. 'increase,' √*vardh*, to increase, fmd. with sf. *tī*), expressions which have often been introduced into European works on language.

Loss of *a*, without admitting vocalisation of consonants, occurs not only before other consonants, but also before *r*, which is capable of being vocalised, in those cases where a vowel follows *r* (from *ar*); in which case, as in all others where *a* is lost before a consonant, the latter alone remains. Examples: *kā-kré*

§ 6. (1. 3. sg. pf. med.),  $\sqrt{\text{kar}}$  (make), for  $*k'a\text{-kar-}\bar{e}$ , and this fr. 1.  $*ka\text{-kar-m}\bar{e}$ , 3.  $*ka\text{-kar-t}\bar{e}$ ;  $k'a\text{-kr-}\bar{u}s$  (3. pl. pf. act.), fr.  $*ka\text{-kar-anti}$ .

Loss of *a* before other consonants, e.g.  $\acute{g}a\text{-ghn-}\bar{u}s$  (3. pl. pf.),  $\sqrt{\text{han}}$ , *ghan* (kill), for  $\acute{g}a\text{-ghan-}\bar{u}s$  (sg.  $\acute{g}a\text{-gh}\bar{a}n\text{-}a$ );  $\acute{g}a\text{-gm-}\bar{u}s$  (3. pl. pf.),  $\sqrt{\text{gam}}$  (go), for  $*\acute{g}a\text{-gam-us}$  (sg.  $\acute{g}a\text{-g}\bar{a}m\text{-}a$ );  $s\text{-}\acute{a}nti$  (3. pl. pres.),  $\sqrt{\text{as}}$  (esse), for  $*as\text{-anti}$  (*as* *s-unt* for *\*es-unt*);  $s\text{-y}\acute{a}ti$  (e.g. in *vy-ava-sy\acute{a}ti*, he determines), for  $*as\text{-yati}$ ,  $\sqrt{\text{as}}$ , *sa*, so too  $\text{ç-y}\acute{a}ti$  for  $*a\text{ç-yati}$ , f.f.  $*ak\text{-yati}$ ,  $\sqrt{\text{aç}}$ , *ça* (acuere);  $\acute{a}\text{-pa-pt-at}$  (3. sg. aor.) for  $*a\text{-pa-pat-at}$ ,  $\sqrt{\text{pat}}$  (fall, fly,  $\pi\tau\text{-}\acute{\epsilon}\sigma\theta\alpha\iota$ ), etc.

$u=va$  (*a* is lost and *v* becomes *u*);  $uk\text{-t}\acute{a}\text{-s}$  (n. sg. masc. past part. pass.),  $\sqrt{\text{vak}}$  (speak, 3. sg. pres.  $v\acute{a}k\text{-ti}$ ),  $u\text{-v}\acute{a}k\text{-}a$  (3. sg. pf.) for  $*va\text{-v}\acute{a}k\text{-}a$ ,  $\bar{u}k\bar{u}s$  (3 pl. pf.) for  $*va\text{-v}\acute{a}k\text{-}\bar{u}s$ , f.f.  $*va\text{-vak-anti}$ ,  $\acute{a}v\bar{o}k\bar{a}m$  for  $*a\text{-va-}u\bar{k}\text{-am}$  (1. sg. aor.), f.f.  $*a\text{-va-vak-am}$  (Gk.  $\epsilon\lambda\pi\omicron\nu$  fr.  $*\acute{e}\text{-Fe-Fe}\pi\text{-ov}$ );  $sup\text{-t}\acute{a}\text{-s}$  (pf. part.),  $\sqrt{\text{svap}}$  (sleep;  $sv\acute{a}p\text{-iti}$  3. sg. pres.,  $\acute{a}\text{-svap-am}$ , 1. sg. aor.);  $ur\bar{u}\text{-s}$  (wide,  $e\upsilon\rho\acute{u}s$ ) for  $*var\bar{u}\text{-s}$  (comp. st.  $v\acute{a}r\bar{y}\bar{y}\bar{a}s\text{-}$ , superl.  $v\acute{a}r\bar{i}\bar{s}\bar{t}ha\text{-}$ ), etc.

$i=ya$  (*a* is lost and *y* becomes *i*);  $i\bar{s}\text{-t}\acute{a}\text{-s}$  (past part. pass.) for  $*yag\text{-ta-s}$ ,  $\sqrt{\text{yag}}$  (offer, worship; 3 sg. pres.  $y\acute{a}g\text{-ati}$ ),  $i\text{-y}\acute{a}g\text{-}a$  (3 sg. pf.) for  $*ya\text{-y}\acute{a}g\text{-}a$ ,  $i\bar{g}\bar{u}s$  (3 pl. pf.) for  $*ya\text{-yag-}\bar{u}s$ , f.f.  $*ya\text{-yag-anti}$ ;  $vidh\text{-yati}$  (3 sg. pres.),  $\sqrt{\text{vyadh}}$  (wound, slay),  $vi\text{-vidh-}\bar{u}s$  (3 pl. pf., 3 sg. =  $vi\text{-vy}\acute{a}dh\text{-}a$ ), etc.

§ 7. Weakening of *a*—1. to *i* and *u* occurs before *r*, sometimes with assimilation to vowel of following syllable; weakening of *a* to *i* often occurs without influence of following sounds. *u* in certain cases corresponds to original *an*, *am* (the nasal is lost, after dulling the preceding *a* into *u*).

Examples.  $gir\text{-}\bar{i}\text{-s}$  (mountain),  $\sqrt{\text{gar}}$  (be heavy), Zend *gairis*, both from  $*gar\text{-i-s}$  (cf. Scl. *gor-a*, with another st.-termn.);  $gur\text{-}\bar{u}\text{-s}$  (heavy), cf. Gk.  $\beta\alpha\rho\text{-}\bar{u}\text{-s}$ , f.f. of both  $*gar\text{-}\bar{u}\text{-s}$ , the original  $\sqrt{\text{fm. gar}}$  comes to light only in the Sk. step-forms of this word, e.g.  $g\acute{a}r\text{-i}\bar{s}\bar{t}ha\text{-s}$  (superl. of  $gur\bar{u}\text{-s}$ );  $kur\text{-}\bar{u}$  (2 imper. act.),  $k\bar{u}r\text{-}u\text{-t}\bar{e}$  (3 sg. pres. med.), and other like forms of  $\sqrt{\text{kar}}$  (make),—these stand for  $*kar\text{-}u$ ,  $*kar\text{-}u\bar{t}\bar{e}$ , etc., whilst the latter again stand for  $*kar\text{-}nu$ ,  $*kar\text{-}nu\bar{t}\bar{e}$ , etc. (v. post. 'Rules of Con-

jagation'), *kur-más* next for \**kur-umas*, fr. \**kar-nu-mas*, where, § 7. as in the similar forms, the *u* which caused the assimilation is lost; *pur-ús* (many), f.f. and Old-Persian *par-u-s*, cf. πολ-ύ-ς, √*par* (fill), *pur-ám*, *pur-í* (state), from same √*par*, with *a* changed to *u* before *r*, without assimilating influence (cf. πολ-ι-ς, f.f. *par-i-s*).

Weakening of *a* to *i* is frequent, e.g. *kir-áti* (3 sg. pres.), √*kar*, pf. *ka-kár-a* (pour out); *gir-áti* (3 sg. pres.), √*gar*, pf. *ga-gár-a* (throw); *ṣiś-más* acc. to sound-laws for \**ṣis-mas* (1 pl.), beside *ṣás-mi* (1 sg.), pres. st. and √*ṣās* (pure √*fm. ṣas*, bid). This weakening occurs especially in the case of roots in *a* (which by-the-by we find wrongly classified with √termns. *ā*, *ē*, *āi*, *ō*, acc. to the system of the Hindu grammarians), e.g. *sthi-tá-s* (*sta-tu-s*, στα-τό-ς), √*stha* (stand); *hi-tá-s* for earlier (Vêd.) *dhi-tá-s* (θε-τό-ς), √*dha* (set); *mi-tá-s* (like the preceding, past part. pass.), √*ma* (measure); st. *pi-tar-* for \**pa-tar-*, cf. πα-τέρ-, *pa-ter-*, √*pa* (protect); further in pres. redupln. e.g. *bi-bhár-mi*, √*bhar* (bear), *tī-ṣṭhā-mi* = ἴστανμι, f.f. of both is \**sti-stā-mi*, earlier \**sta-stā-mi*, √*stha* (stand; cf. Sk. *dá-dhā-mi*, *dā-dā-mi*, and Gk. τί-θη-μι, δί-δω-μι, where the Sk. does not yet show that weakening which has occurred in Gk.).

*u*=*an*, *am*, e.g. in termn. of 3 pl. -*us*, fr. -*anti*, -*ant*, e.g. *bhārēy-us*=φέρειν=\**bharay-ant* (3 pl. opt. pres. act.), *babhrús*=\**babharanti* (3 pl. pf. act.), *ubhā*, *ubhāu*=ἄμφω, *ambō*; thus later languages show the more original form, etc.

2. *a* becomes weakened to *ī*, *ū*, likewise in the combination *ar*, so that *īr*, *ūr*, the latter after labial consonants, are considered as of the same force as vowel *r*; the weakening to *ī*, however, occurs not only before *r*, but also not seldom in other cases.

*ūr*=*r* (vowel)=*ar* after labial initial √sounds, e.g. *pūr-ná-s* (plenus) for \**pr-na-s*, Zend *pere-na-s* (Zend *ere*=Sk. vowel *r*), f.f. \**par-na-s*, √*par* (fill), etc., yet also *kañ-kūr-*, intensive pres. st. √*kar* (go), and the like.

*īr*=*r* (vowel)=*ar* after all except labial initial sounds, e.g.

§ 7. *stīr-ṇā-s* (past part. pass.) for *str-ṇā-s*, f.f. *star-na-s*, √*star* (strew); *ḍīrghā-s* for \**ḍrgha-s* (long), Zend *daregha-s*, Gk. *δολεχό-ς*, etc., f.f. \**dargha-s*, cf. compar. and superl. formed in Sk. with step-fmn. of √vowel *a*, compar. st. *drāgh-īyās-*, superl. st. *drāgh-iṣṭha-*.

*i* as a weakening of *a* often occurs, especially in cases of roots in *a* (like its weakening to *i*), nevertheless it also often occurs in the case of a non-radical *a* belonging to formative affixes, e.g. *hī-nā-s* for \**ha-na-s* (past part. pass.), √*ha* (leave, 3 sg. pres. *ḡā-hā-ti*); *pī-ta-s* (past part. pass.), √*pa* (drink, 3 sg. pres. *pība-ti* for \**pī-pa-ti*, fr. \**pa-pa-ti*); *yu-nī-mās* for \**yu-na-mas* (1 pl. pres.), cf. *yu-nā-ti* (3 sg. pres.), pres. st. *yu-na-*, √*yu* (iungere), etc.

Note 1.—Through this weakening are developed also roots with *i*, which originally were in *a*, e.g. Sk. *kri* (buy), e.g. pres. *kri-ṇā-ti*, fut. *krē-ṣyāti*, pf. *kikrāy-a*, etc., thus with pure *i*, seems nevertheless to have come from original *kra*=*kar*, cf. Gk. *πέρ-νῃμι*, Lith. *perkù* (buy), where the √ with *k* is a further formation. The weakenings of original *a* are altogether not rarely formed by steps like original *i* and *u*; e.g. fr. *pī-tā-mahā-s* (masc. grandfather; on *pī-tar-*, √*pa*, v. supr.) is formed a st. *pāi-tā-maha-* (adj. grandfatherly); fr. st. *dhīr-a-* (adj. firm, stable), √*dhar* (hold), weakened to *dhīr*, sf. *-a-*, *dhāir-ya-m* (neut. stability); fr. *pur-nā-māsa-s* (masc. full-moon; on *pūr-nā-*, √*par*, v. supr.), *pāur-na-māsā-* (adj. of a full-moon), etc. A change of *a*-scale to *i*- and *u*-scales is accordingly seen, especially in later formations, having arisen after the language-instinct had lost the root-forms.

Note 2.—Cf. the cases where *i* apparently stands for *a*, though it really is a contraction of *ya*, *yā*, or an auxiliary vowel, § 15, c, f.

§ 8. The fundamental vowel *a* appears in Sk. as the commonest vowel in roots and relation-sounds, e.g. *ād-mi* (1 sg. pres.), √*ad* (edere); *ās-ti* (3 sg. pres.), √*as* (esse); *bhār-asi* (2 sg. pres.), *ā-bhar-at* (3 sg. impf.), *bhār-antas* (φέροντες, n. pl. masc. pres. part. act.), √*bhar* (bear); *āp-as* (opus), *āp-as-as* (operis); *mān-as* (μέν-ος), *mān-as-as* (\**μεν-εσ-ος*, μένους); *ās-va-s*, f.f. *akras* (equos, ἵππος for \**ικFος*); *sa* (ὁ), *ta-m*, (τό-υ, is-tu-m); *ḡata-tamā-s* (centesimus), etc.



The step-formation of *a* to *ā* cannot further be analysed § 9. into first and second steps (as in Gk., Lat., Goth.), and, moreover, can scarcely—only by means of the analogy of completely corresponding words in *i* and *u*—be distinguished from lengthening. Therefore we hesitate to make the distinction between lengthening and step-formation in the case of *f.* vowel *a*, and accordingly probably admit many forms as steps, which would be more accurately denoted as lengthenings. The step-formation of *a* to *ā* occurs in roots and in relation-sounds.

Examples of step-formed roots with  $\sqrt{\text{vowel } a}$  are *ba-bhār-a* (3 sg. pf.) bes. *bhār-āmi* (1 sg. pres.),  $\sqrt{\text{bhar}}$  (bear); *u-vāk-a* (3 sg. pf.) bes. *vāk-ti* (3 sg. pres.),  $\sqrt{\text{vak}}$  (speak); *vās-as* (uestis) bes. *vas-tē* (3 sg. pres. med.),  $\sqrt{\text{vas}}$  (clothe); *kār-āyati* (3 sg. pres. causat. vb.) bes. *kar-ō-ti* (3 sg. pres.),  $\sqrt{\text{kar}}$  (make), etc.

*Note.*—The roots which end in *a* occur mostly in step-raised forms [whence arose the grammatic rule that roots in *a* appear only in pronominal functions, as *ta* (n. sg. masc. *sa*, acc. *ta-m* dem.), *ya* (n. sg. masc. ntr. *ya-s*, *ya-t* rel.), *ka* (n. acc. sg. masc. *ka-s*, *ka-m*), etc., whilst all verbal roots end in *ā*—acc. to Hindu grammarians in *ā*, *ē*, *āi*, *ō*]. Also the un-raised forms, indeed the shortened forms of these roots are not rare, e.g. *gi-gā-ti*, *gā-gā-ti* (3 sg. pres.), but *ga-tā-s* (past part. pass.), *ga-hi* (2 sg. imper.), *gā-kkhati*, f.f. *ga-skati* (3 sg. pres.), cf. βέβαιεν, βάρης,  $\sqrt{\text{ga}}$  (go); *dā-dā-mi* (1 sg. pres. *δί-δω-μι*), but *da-d-mās* for *\*da-da-mas* (1 pl. pres.), cf. *δί-δο-μεν*, *δό-σις*, *δο-τήρ*, *dāmus*,  $\sqrt{\text{da}}$  (give); *dā-dhā-mi* (1 sg. pres.), but *da-dh-mās*, fr. *\*da-dha-mas*, cf. *τί-θε-μεν*, *θέ-σις*, *θε-τός*,  $\sqrt{\text{dha}}$  (set); *ā-pā-t* (3 sg. aor.), *pā-syā-ti* (3 sg. fut.), but *pi-ba-ti* for *\*pi-pa-ti*, fr. *\*pa-pa-ti* (3 sg. pres.), cf. *πέ-πο-μαι*, *πό-σις*,  $\sqrt{\text{pa}}$  (drink); *pī-ti* (3 sg. pres.), but *pā-ti-s*, cf. *πό-σις*, Goth. *fa-th-s*, i.e. *\*fa-di-s*, Lith. *pā-t-s*, for *\*pa-ti-s* (lord), with weakening of *a* to *i* in *pi-tar-* (n. *pitā*), cf. *πα-τήρ*, f.f. *pa-tar-*,  $\sqrt{\text{pa}}$  (protect); *tī-śhā-mi*, *ἵ-στη-μι* (1 sg. pres.), but *ti-śtha-ti* for *\*sti-sta-ti*, fr. *\*sta-sta-ti* (3 sg. pres.), with weakening of *a* to *i* in *śhi-tā-s*, f.f. *\*sta-tā-s*, cf. *στᾱ-τό-ς*, *stā-tu-s*,  $\sqrt{\text{stha}}$ , original *sta* (stare), etc. Here accordingly, as in many other like cases, the root-forms are evidently *ga*, *dha*, *da*, *pa*, *pi*, *stha*; so too *a* is everywhere to be assumed to be the root-sound, even where it happens that the raised forms only are seen in

§ 9. the existing language. Cf. my treatise on 'a-roots in Indo-germanic,' Beitr. ii. 92-99.

*a* as a sound expressing relation is found raised in termin. *a* of pres. st. *bhārā-mi* (1 sg. pres.), *bhārā-masi* (1 pl. pres.) bes. *bhāra-si* (2 sg. pres.), *bhāra-ti* (3 sg. pres.), etc., *bhāra-* is pres. st. of  $\sqrt{bhar}$  (bear); in almost all cases of the fem. of *a-* st., e.g. *nāv-ā nāv-ām* (n. acc. sg. fem. nou-a, *véFa*) bes. *nava-s nava-m* (n. acc. sg. masc.), st. *nava-* (nouos); *āṣ-vā* (equa) bes. *āṣ-va-s* (equos), st. *āṣ-va-* (*ak-va-*), and generally before certain case-sff., e.g. *dēvā-s*, earlier *dē-vā-sas* (n. pl.) bes. *dēvā-s* (n. sg.), st. *dēvā-* (deus); further in final syllables of sundry consonantal noun-stems before certain case-sff., e.g. *dā-tār-am* (acc. sg.), *dā-tār-as* (n. pl.), fr. st. *dā-tār-* (da-tor), which appears pure in e.g. *dā-tār-i* (loc. sg.), in *dā-tr-bhis* (instr. pl.), *dā-tr-ē* (d. sg.), and others it is weakened to *dā-tr*.

§ 10. 2. *i*-scale.

Fundamental vowel *i*; *i-mās*, cf. *ἰ-μεν* (1 pl. pres.),  $\sqrt{i}$  (*i-re*); *vid-mās* (1 pl. pres.), cf. *ἴδ-μεν*, Hom. *ἴδ-μεν*,  $\sqrt{vid}$  (*uid-ere*, scire); *viṣ-āti* (3 sg. pres.), *viṣ-as* (n. pl. people, husbandmen),  $\sqrt{viṣ}$  (go in, dwell); *div-am div-ās* (acc. g. sg. of n. *dyāu-s*, sky),  $\sqrt{div}$  (shine; cf. *ΔιF-ός*, similarly fr. *Ζεύς* = \**Δyeus*); *pāk-ti-s* (fem. coctio), cf. *πέπ-σις* for \**πεπ-τις*,  $\sqrt{pak}$ , *πεπ*, origl. *kak*, cf. Lat. *coc*, Lith. *kep* (coquere), formed through sf. *-ti-*, f.f. therefore *kak-ti-s*.

*ī* is not seldom a lengthening of genuine *i*, just as we have already found it to be a lengthening of *i = a*. The laws under which this lengthening takes place are not discovered in every instance. The lengthened *ī* is often interchanged with the unlengthened *i*, and is subject to step-formation and change (to *iy*, *y*), like the latter.

In cases like *pāti-n* (acc. pl. msc.), f.f. *pati-ms*, st. *pāti-* (lord); *pāktī-s* (acc. pl. fem.), f.f. *pakti-ms*, st. *pākti-* (coctio), we clearly see a compensatory lengthening, v. post. (§ 15, d), where also the lengthening bef. *y* is yet to be mentioned (§ 15, a), as

e.g. *ī-yāt* bes. *i-yāt* (3 sg. opt.)  $\sqrt{i}$  (ire). Bef. final *r* in noun-§ 10. stt., as bef. *r* folld. by a sf. which begins with a conson., lengthening occurs in the case of *i* and *u*, e.g. st. *gir-* (speech; acc. sg. *gir-am*), n. sg. *gīr* for \**gir-s*, loc. pl. *gīr-śū*, instr. pl. *gīr-bhis* for \**gir-su*, \**gir-bhis*.

So also in roots *i* appears bes. *i*, and is grammatically arbitrary, since in these cases the  $\sqrt{fm}$ . is usually characterized by the long vowel, as e.g.  $\sqrt{bhi}$ , not *bhī* (frighten), cf. *bi-bhi-mās* and *bi-bhī-mas* (1 pl. pres.; 3 sg. *bi-bhē-ti*); in other roots it happens that only the lengthened vowel appears, e.g. *nī-tā-s* (past part. pass.),  $\sqrt{ni}$  (*nī* acc. to Grammarians and Dictt.; 'lead'); *pri-tā-s*,  $\sqrt{pri}$  (*pri*, delight), etc.

*Note 1.*—Root-fms. with final vowels are particularly often mentioned in the lengthened fm. in gramm. and dictt., because the lengthening was particularly popular in these cases. On the unoriginality of *ī* and *ū* in Indo-Eur., cf. my remarks in Beitr. i. 328–333.

*Note 2.*—On *tr-tīya-s* (*ter-tiu-s*), in wh. *tr* can be taken as a weakening fr. *tri* (st. of numeral 3), v. sub. 'Numerals.'

The 1st step of *i* is in Sk. *ē*, e.g. *ē-mi* (εἶ-μι), f.f. *ai-mi*, § 11.  $\sqrt{i}$  (ire); *vēd-a* (Foīda), *vēd-a-s* (n. sg.; sacred writings of the Hindus, Vēda),  $\sqrt{vid}$  (see, know); *vi-vēṣ-a* (3 sg. pf.), *vēc-a-s* (n. sg. house, cf. *Folk-o-s*, *uic-u-s*), f.f. *vaiḥ-a-s*,  $\sqrt{viṣ}$  (go in); *dēv-ā-s* (deus), f.f. *daiv-a-s*,  $\sqrt{div}$  (shine); *pāk-tē-s* (g. sg.), *pāk-ti-s* (coctio), *pāt-ē-s* (g. sg.), *pāt-i-s* (lord); *bi-bhē-ti* (3 sg. pres. redupl.),  $\sqrt{bhi}$  (frighten); *nē-tra-m* (eye, lit. 'the guiding one'), *nāy-ati* (3 sg. pres.), *nay*=*nē* (v. post. § 14, d),  $\sqrt{ni}$  (lead); *cē-tē* (κεῖ-ται 3 sg. pres. med.),  $\sqrt{ci}$  (rest, lie), etc.

The 2nd step of *i* is in Sk. *āi*, e.g. *vāiṣ-ya-s* (man of third caste),  $\sqrt{viṣ}$  (go in; cf. *viṣ-as* and *vēṣ-a-s*); *vāid-ya-s* (vēdic, learned),  $\sqrt{vid}$  (see, know; cf. *Vēd-a-s*); *dāiv-a-s* (godly), whence *dāiv-a-m* (destiny), st. *dēv-ā-* (deus),  $\sqrt{div}$  (shine); *śāiv-a-s* (belonging to the god Śiva, Śiva-worshipper), fr. *Śivā-s* (the god Śiva); *vāiṣṇavā-s* (belonging to Vishnu, Vishnu-worshipper

§ 11. fr. *Viṣṇu-s* (the god Vishnu); bef. vowels not *ai* but *ay* is found (§ 14), e.g. *nāy-aka-s* (masc. leader), *nāy-āya-ti* (3 sg. pres. causat. st.), *√ni* (lead), etc.

§ 12. 3. *u*-scale.

This scale, in all its parts, runs parallel to the *i*-scale, also the lengthening of *u* to *ū* occurs here, like *i* to *ī* above.

Fund. vowel *u*, e.g. *buddhā-s* for *\*budh-ta-s* (past part. pass.), *bu-budh-é* (1, 3 sg. pf. med.), *√budh* (learn, know); *tud-āti* (3 sg. pres.), *√tud* (thump); *yug-ā-m* (iugum, ζυγόν), *yuk-tā-s* (past part. pass.) for *\*yug-ta-s* (iunctus), *ā-yuḡ-at* (3 sg. aor.), *√yuḡ*, *yug* (iungere); *su-tā-s* (past part. pass.), *√su* (produce, sow); *ṣru-tā-s*, κλυ-τό-ς (past part. pass.), *ṣru-dhi* (vēd. 2 sg. imper. aor. κλῦ-θι), *√ṣru* (hear), etc. In pres. st. *ṣr-nu-*, e.g. *ṣr-ṇō-mi* (1 sg. pres.), *√ṣru* (hear), *ru* is exceptionally weakened to *r*, by complete loss of *u*.

The lengthening of *u* to *ū* occurs here, just as in the *i*-scale *i* becomes *ī*, e.g. *ā-bhū-t* (ĕ-φν(τ), 3 sg. aor.), *bhū-tā-s*, *bhū-tā-m* (masc. ntr. past part. pass.), *√bhu* (*bhū*, be), cf. *ḥv-ṛō-v*, *fū-turu-s*; *sū-nū-s* (son), cf. Lith. *sūnūs*, Goth. *sunus*, *√su* (bear, sow, sts. also given as *sū*); *sū-nū-n* fr. *\*su-nu-ns* (acc. pl.), Goth. *sununs*, st. *sūnū-* (n. sg. *sū-nū-s*, cf. § 15, d). Like *i*, so *u* bef. *r*, and bef. *r*+conson. in noun-stt. is lengthened (§ 10), e.g. st. *dhur-* (fore-part of a coach-pole, e.g. acc. sg. *dhūr-am*), n. *dhūr* for *\*dhur-s*, instr. pl. *dhūr-bhis* for *\*dhur-bis*, etc.

§ 13. 1. step *ō*, e.g. *bōdh-ati* (3 sg. pres.), *√budh* (learn, know); *pra-tōd-a-s* (masc. goad), *√tud* (push); *yu-yōḡ-a* (1, 3 sg. pf.), *yōḡ-a-s* (joining, speculation), *√yuḡ* (iungere); *bhāv-ati* (3 sg. pres.), *ā-bhāv-at* (3 sg. pf.), *bhāv=bhō* (v. § 14, d), *√bhu* (be); *sōś-yāti* (3 sg. fut.), *√su* (bring forth); *crō-tra-m* (ntr. ear), *√ṣru* (hear), *sū-nō-s* (g. sg.), st. *sūnū-* (n. sg. *sū-nū-s*, son), cf. Lith. *sūnaūs*, Goth. *sunaus*, etc.

2. step *āu*, e.g. *bāuddhā-s* (masc. Buddhist) fr. *buddhā-s* (past part. pass. n. propr. *Buddha*), *√budh* (know); *ā-tāud-sam* for *\*a-tāud-sam* (1 sg. aor.), *√tud* (push); *yāug-ika-s* (adj. fr. *yōḡa-s*

supr.), st. *yóga-*,  $\sqrt{yug}$  (iungere); *bhāv-a-s* (being, nature), § 13. *bhāv*=*bhāu* (v. § 14, d),  $\sqrt{bhu}$  (be); *sāu-ti* (3 sg. pres.), *su-śāv-a* (1, 3 sg. pf.) for \**su-sāv-a* (v. sub. consonn.), *sāv*=*sāu* (v. § 14, d),  $\sqrt{su}$  (bring forth); *á-çrāu-śam* (1 sg. aor. compos.),  $\sqrt{çru}$  (hear), etc.

*Note*.—"i and u are subject to step-formation only when they are at the end of roots," is the rule of Sk. grammar, i.e. they are in these cases lengthenings of real *i*, *u*; as medial root-sounds however, they are felt by the language-instinct to be unorigl., and are therefore not treated like genuine *i*, *u*. Real *i* and *u* appear besides only before root-termns. which consist of one consonant.

## VOWEL SOUND-LAWS.

## § 14.

*Note*.—Only the most important Sk. sound-laws are here mentioned—those which operate within the word: the changes undergone by the termn. of a word in consequence of its place in a sentence belong to the department of Sk. special-grammar, not to the Indo-Eur. (the so-called 'Comparative') Grammar.

## 1. Laws of the concurrence of vowels.

Fundamental law: Sk. permits hiatus in its earliest remains of language alone (in the Vēdic hymns), where we find even two like vowels in juxtaposition. In classical Sk. hiatus is avoided, a. by contraction, b. by loss of the former vowel, c. by separation, d. by change of vowel to corresponding spirant.

*Contraction* occurs when *a* happens to stand before another vowel, except in those cases where *a* is lost bef. the following vowel. Change to the consonn. takes place when *i*, *u* (including their furthest formations *ē*[=*ai*], *ō*[=*au*], *āi*, *āu*). This contrast between *a* and *i*, *u*, arises from the fact that *a* has no corresponding spirant, whereas *i*, *u*, have by their side *y*, *v*, which are only different from them through a slight distinction in pronunciation; the change from *i*, *u*, to *y*, *v*, is through intermediate *iy*, *uv*.

a. Exx. of contraction: pres. st. *bhāra-*+*i* of opt. mood=*bhārē-*, e.g. *bhārē-t* fr. \**bhara-i-t* (3 sg. opt. pres.,  $\sqrt{bhar}$ , bear);

§ 14. noun st. *ácva-*+*i* of loc. case=*ácvē* (loc. sg. of n. sg. *ácva-s*, equos), etc.

*Note*.—v. older peculiar contractions post. (§ 15, c).

b. Loss of *a* occurs e.g. in cases like *dhantn-* (rich, n. sg. masc. *dhantī*), fr. st. *dhána-* (neutr. n. sg. *dhána-m*, wealth)+sf. *in*; only bef. sf. *ya* is *a* regularly lost, e.g. st. *dhán-ya-* (adj. rich, n. sg. masc. *dhán-ya-s*), from same st. *dhána-*. Roots in *a* do permit this loss of *a* not unfrequently, e.g. *da-d-más*, *da-dh-más* (1 pl. pres. act.), fr. pres. stt. *da-da-*, *da-dha-* (1 sg. *dá-dā-mi*, *dá-dhā-mi*), *√da* (give), *√dha* (set); so also in pf. they lose their termn., and subsequently even assume an auxil. vowel *i*, as if they ended in a conson., *da-d-i-má*, *da-dh-i-má* (1 pl. pf.), like *tu-tud-i-má*, *√tud* (push), so that it becomes probable that *a* was lost bef. *i*, and not *ma*, but *ima*, etc., was considered to be the termn.

c. The splitting-up of *i* and *u* (and of their lengthenings *ī*, *ū*,—perh. it is more correct to suppose no lengthening to take place before vowels) to *iy*, *uv*, is retained where these vowels are radical in monosyll. words, more rarely also in ordinary Sk. otherwise, *i.e.* when two consonn. stand before the vowel.

Exx.: *bhiy-i* (loc. sg.), cf. n. sg. *bhī-s* (fear), st. thus *bhī-*; *iy-āy-a* (3 sg. pf.), *√i* (go), fr. *\*i-āi-a*; *āi* is *√i* in 2nd step, *i* in fund. fm.

*cu-cruv-ús* (3 pl. pf.), *√cru* (hear), f.f. *ku-kru-anti*; *āp-nuv-ánti* (3 pl. pres. fmd. by *nu* fr. *√āp*, work); *bhruv-i* (loc. sg.), n. sg. *bhrū-s* (ὀφρύς), st. therefore *bhrū-*.

*Note*.—*y-anti* (3 pl. ind. pres.), *√i*, contrary to rule where we should have expected *iy-anti*; *i* is here exceptionally treated according to the plan laid down below.

d. The change into corresponding semi-vowel is regular in ordinary Sk., that is, occurs exclusively in the case of *i* and *u* as 2nd part of diphthongs *e* (=ai), *āi*, *ō* (=au), *āu*, e.g. *pāktī-ā* (instr. sg. of n. sg. *pākti-s*, coctio) for *\*pākti-ā*, *nī-ny-ē* (1, 3 sg. pf. med.), *√nī* (nī, lead) for *\*nī-nī-ē*.

*náy-ati* (3 sg. pres.),  $\sqrt{ni}$  (lead), here raised to 1st step *nē*, § 14. i.e. *nai*.

*ni-náy-a* (1, 3 sg. pf. act.),  $\sqrt{ni}$ , *nāi*=2nd step of *ni*.

*gr-ṇv-ánti* (3 pl. pres. act.),  $\sqrt{gru}$  (hear), pres. st.  $\sqrt{gr-ṇu-}$  (cf. § 12) for \**gr-ṇu-anti*, f.f. *kru-nu-anti*; cf. supr. *āpnv-ánti*, with splitting of *nu* into *nuv*, whereas here two consonn. stand before *u*.

*grāv-ana-m* (the hearing, ear; n. sg. ntr.),  $\sqrt{gru}$  (hear), raised to *gro*=*grau* + sf. *ana*; *grāv-as* (ntr. the hearing, ear = κλέφος, Scl. *sloves*-), likewise fr. same root + sf. *as*.

*gu-grāv-a* (1, 3 sg. pf.),  $\sqrt{gru}$  (hear), here raised to 2nd step *grāu*.

*Note 1.*—The earlier lang. shows the splitting-up only in the case of *i*, *u*. The scale of variation is as follows: 1. *i*, *u* + vowel, e.g. *pākti-ā*; but there arises very easily, 2. *iy*, *uv* + vowel, e.g. *pāktiy-ā*; and finally the vowel element is lost entirely, 3. *y*, *v* + vowel, e.g. *pākty-ā*.

*Note 2.*—The fms. explained in § 6, such as *ūk-ús*, *īg-ús*, form no exception to the laws above laid down, and are prob. not contracted fr. \**uukús*, *iīgús*, but rather arise fr. resolution of *v*, *y*, into *u*, *i*; \**va-vāk-us*, \**uakús*, \**uṛkús*, *ūkús*; \**ya-yāg-us*, \**iyāgús*, \**iīgús*, *īgús*, are the gradations of change here to be understood.

## 2. Vowel-change caused by the neighbouring consonn.

*Note.*—A single instance had to be mentioned as early as § 7, as *pūrṇás* with *ū* on acct. of *p*; generally the weakenings of *a* bef. *r* are intrinsically caused by this conson.

a. *y* often lengthens preceding *u*, *i*, *a* (for splitting-up of *y* to *iy*, *īy*, v. supr. § 14, 1, c.), e.g. *crū-yá-tē* (3 sg. pres. pass.),  $\sqrt{gru}$  (hear); *gī-yá-tē* (3 sg. pres. pass.),  $\sqrt{gi}$  (conquer, e.g. in *gī-tá-s*, past part. pass., *gáyati* 3 sg. pres.); *gā-ya-tē* (is born, 3 sg. med.),  $\sqrt{ga}$  (generally *gan*, and thus means bring forth, bear; cf. Zend *za-yē-itē*, f.f. therefore *ga-ya-tai*), etc.

*Note.*—Bef. *y*=*i*, *ī* also may be explained as splitting-up of *i* to *iy*. Perh. fr. this source arise also the lengthenings of *u* to *ū*, and *a* to *ā*, bef. *y*. Cf. sq.

§ 15. b. *iy* sometimes occurs instead of *y*, and also *īy* with the favourite vowel-lengthening bef. *y*.

After *a* in certain cases *iy* (with *a* or *ā* therefore *ēy*) instead of *y* (with *a* or *ā* therefore *ay*, *āy*), e.g. pres. st. in *a*+opt. element *ya* forms not *-a-ya*, but *-a-īya*, i.e. *-ēya*, e.g. *bōdhēyam* for *\*bōdha-ya-m* (1 sg. opt. pres.), pres. st. *bodha-*, *√budh* (learn, know); *dē-ya-s* (part. necessitatis, n. sg. masc.) for *\*dā-ya-s*, st. *dā-ya*, consisting of step-formed *√da* (give), and sf. *ya*; *gāṅgēya-s* (found in or on the Ganges), fr. *gāṅgā* (nom. pr. Ganges), step-fmd. *gāṅgā*+sf. *ya*, for *\*gāṅgā-ya-s*.

Also after consonn. occurs *īy* for *y*, thus in compar. st. fmd. with origl. sf. *yans*, e.g. st. *lāghīyās-* (n. sf. masc. *lāghīyān*), fr. *laghū-s* (light)=*έ-λαχύ-s*, for *\*lagh-yās*, cf. *έ-λάσσω* for *\*λαχ-yon*, and superl. *lāgh-iś-ṭha-s*, *έ-λάχ-ισ-το-s*, where *is-* is a relic of *-yas-*, *-yās-*. So moreover the sf. *ya* has also a fm. *īya*, e.g. st. *karaṇ-īya-* (faciendus) for *\*karan-ya-*, st. *kāra-ṇa*, which loses its termn. bef. *ya* (§ 14, 1, b), etc.

*Note.*—*īy=y* is not developed in Indian until after the division of Aryan into Ind. and Eran.; the Zend, which stands so close to Old-Ind., still has *y=Sk. īy*.

c. *yā* was sometimes compressed into *ī*. So esp. in fem. stt. in *ī*, which prob. can only be=*yā*, e.g. *bhārantī* (the bearing one, f.) =*\*bharant-yā*=*φέρουσα*=*\*φερουτ-yā*; *ḡanitṛī*=*\*ganitr-yā* fr. *\*gan-i-tar-ya* (genetrix)=*γενέτειρα*, i.e. *\*γενετερ-ya*, etc., *ya*- stt. fr. usual masc. stt., Sk. *bhārant-*, *ḡani-tār-*, Gk. *φερουτ-*, *γενε-τήρ-*; *dēvī*=*\*daivā* (dea), cf. Lith. *deivė*, i.e. *\*deivyā*, f.f. *daiv-yā* (once 'goddess,' now='ghost'), later fmn. fr. st. *dēvā*, Lith. *dėva*, f.f. *daiva-* (deus); Vēd. *āvī* (instr. sg. for Sk. *avy-ā*, both fr. *āviā* (*āvi-s*, ouis, *ā* sf. of instr. sg.)), etc.: *ī* is clearly a weaker vowel-fm. for *yā* in opt., e.g. 3 sg. act. *bībhr-yā-t*, but 3 sg. med. *bībhr-ī-ta*, *√bhar* (bear, pres. st. *bībhar-*), etc.

Sometimes *ī* is a product of a similar earlier contraction of *i-a* or *ya* after loss of conson. betw. *i* and *a*, as in *sād-āti* (3 sg. pres.), fr. *\*si-adati* for *\*si-sad-ati*, *√sad* (sit, pf. *sa-sād-a*, aor.



*á-sad-at*), like  $\text{ἔζω}$  fr.  $*\text{é}^{\text{h}}\text{ζω} = *si\text{-sed-yō}$ , f.f. *si-sad-yami*, Lat. *sīd-o* § 15. fr.  $*sisdo$  for *si-sed-o*, f.f.  $*\text{si}^{\text{h}}\text{-sad-ami}$  (with not unfreq. pres. redupln.), also the *īr* now used as a root, e.g. *īr-té* (3 pres. med., rises, causat. *īr-āyati*, he arouses), is recognized as a product of pres. redupln.; *īr* =  $*i\text{-ar}$ ,  $*iyar$ ,  $\sqrt{ar}$  (go), etc.

d. Compensatory lengthening. Esp. in declens.-fms. (n. sg., acc. pl.) is found lengthening of the foregoing vowel after loss of conson. Exx.:

N. sg. *rāḡā* for  $*rāḡan\text{-s}$ , st. *rāḡan-* (masc. rex) + nom. sf. *s*, cf.  $\text{ποιμήν}$  for  $*\text{ποιμεν}\text{-s}$ ; *dhāntī* for  $*dhanin\text{-s}$ , st. *dhanin-* (rich); *mātā* for  $*mātar\text{-s}$ , st. *mātar-* (mater), cf.  $\text{μήτηρ}$  for  $*\text{μητερ}\text{-s}$ ; *dūr-manās* for  $*dur\text{-manas}\text{-s}$  (masc. fem. evil-minded, compounded of *dus*, evil, *mānas* ntr. mens), cf.  $\text{δυσμενής}$  for  $*\text{δυσ-μενεσ}\text{-s}$ ; *agnimān* for  $*agnimant\text{-s}$  (fiery, st. *agni-*, ignis + sf. *-mant*). Notice *bhāran* without compens. lengthening for  $*bharant\text{-s}$  (n. sg. part. pres. act., whilst the corresponding Gk.  $\text{φέρων}$  for  $*\text{φερον}\text{-s}$  has the lengthening).

Acc. pl. *ācṛvān* for  $*aṛvan\text{-s}$ , n. sg. *ācṛa-s* (equos); *pātīn* for  $*patin\text{-s}$ , n. sg. *patis* (lord); *sūnūn* for  $*sūnun\text{-s}$ , n. sg. *sūnū-s* (son); *mātīs* for  $*matī\text{-ns}$ , n. sg. *matī-s* (fem. thought): *dhēnūts* for  $*dhēnun\text{-s}$ , n. sg. *dhēnū-s* (milch cow).

Bef. sonant consonn. we ought prob. to consider *ō* to be a compens. lengthening = *as*, with dulling of the vowel, e.g. *mānōbhis*, instr. pl. for  $*manas\text{-bhis}$ , fr. *mānas-* (neutr. mens, μένος) and *bhis* (sf. of instr. pl. consisting of *bhi* + pl. sf. *s*), etc. This change of *as* to *ō* often takes place in case of final *as*.

*Note.*—In the case of compens. lengthening in Sk. and in the other languages, we might make a more accurate distinction as follows: 1.  $\sim + \text{conson.} = \sim$  (cf. O.-Bulg. instr. sg. *-mī* = origl. *bhi*, bes. instr. pl. *-mi*, i.e. *-mī* = origl. *-bhis*), in terminations; medially this case is not found: 2.  $\sim + \text{conson.} 1 + \text{conson.} 2 = \sim$  (e.g. *mātā* for  $*mātar\text{-s}$ ) in termn.: 3.  $\sim + \text{conson.} 1 + \text{conson.} 2 = \sim + \text{conson.} 2$ , final and medial (e.g. *mātīs* for  $*matin\text{-s}$ ; Gk.  $\text{εἰμὶ}$  for  $*\text{έσμι}$ ; a subdivn. forms here  $\sim + \text{cons.} 1 + \text{cons.} 2 + \text{cons.} 3 = \sim + \text{cons.} 3$  (e.g. *ίστάς* for  $*\text{ισταν}\text{-s}$ ): 4.  $\sim +$

§ 15. conson. 1 + cons. 2 = <sup>-</sup>+ cons. 1 (e.g. *μήτηρ* for \**μητεps*), or <sup>~</sup>+ cons. 1 + cons. 2 + cons. 3 = <sup>-</sup>+ cons. 1 (e.g. *φέρων* for \**φερονrs*, finally and medially, the latter, e.g. Gk. *ἔφηνα* for \**ἐφανσα*). The physiological explan. of this sound-process is difficult, esp. in case No. 4.

e. Dulling of *ā* to *ē* and *āu* bef. lost conson. and *in fine*. For *ā* there occurs a dulled fm. in *ē*, in certain cases in the middle of a word, when *ā* has been produced through compens. lengthening (§ 15, d), in the case of unusual and late consonantal loss: in termn. it occurs, but is likewise confined to certain cases; also we find *ē* for *ā*, like *āu* for *ā*, the latter of which is retained in the old lang. Exx.:

*ē* for *ā* when consonn. have been lost; thus in imperat. pres. *ēdhi* for \**ā-dhi*, \**as-dhi* (√ and pres. st. *as-*, esse, *dhi* termn. of 2 sg. imper.); *dhēhi* for \**dhāhi*, with asp. (v. § 59) for Vēdic *daddhi* for \**dadh-dhi* (pres. st. *dadh*, √*dha*, set); *dēhi* for \**dāhi*, fr. \**dadhi* for *daddhi* (pres. st. *dad*, √*da*, dare); in pf. fm. as Sk. *pēt-i-mā* for \**pāt-i-ma*, Vēd. *papt-i-mā* fr. \**pa-pat-ma* (1 pl. act.; pf. st. *papat-*, √*pat*, fly, fall); *tēn-i-rē* for \**tān-i-rē* fr. older *ta-tn-i-rē* (3 pl. med.; pf. st. *tatan-*, √*tan*, stretch), etc.; finally in voc. of fem. *a-* st., e.g. *āçrē* (but earlier still *āçva*), voc. of *açvā* (equa). *āu* for earlier *ā* (cf. *ō* for *as* in termn. bef. sonants, § 15, d) occurs in n. acc. dual, e.g. *āçvāu*, earlier *āçvā* (n. *āçvas*, equos); further in 1, 3 sg. pf. act. of roots in *a*, e.g. *dadāu*, archaic *dadā*, √*da* (dare).

f. An auxil. vowel *i*, *ī*, occurs betw. stem-termns. and termns. which begin with a conson. in word-fmn., esp. in conjugation fms., in which origly. and partly still in the earlier lang., the termn. was added immediately to the stem-termn., e.g. pres. fm. of single vbs., as *svāp-i-mi*, *svāp-i-ši*, *svāp-i-ti*, *svāp-i-mās* (1, 2, 3 sg., 1 pl. pres.), etc., for \**svap-mi*, etc., √*svap* (sleep); in pf. this occurs regularly in case of certain persons, e.g. 1 pl. *tutud-i-mā*, √*tud* (tundere), etc. Here we often see even now the older fms. without inserted *i*, partly even in ordinary Sk., as e.g. *kakār-tha* (2 sg. pf.), √*kar* (facere), partly in the earlier lang.

of the Vēdas, in which a fm. *tutudmā*, etc., may be found. In § 15. fut. e.g. *gam-i-śyāmi* (1 sg. fut.),  $\sqrt{\text{gam}}$  (ire); in part. pres. pass., e.g. *vid-i-tā-s*,  $\sqrt{\text{vid}}$  (see, know), and many similar fms., this insertion of *i* occurs in certain roots.

$\bar{i}$  occurs as auxil. vowel in aor.-fms., e.g. 2 sg. *á-nāi-ś-ī-s*,  $\sqrt{n}$  (*nā*, lead), bes. 1 pl. *ánāi-ś-ma*; in pres. fms. as 1 sg. *brāv-ī-mi*, 3 sg. *brāv-ī-ti*, bes. 1 pl. *brū-mās*,  $\sqrt{\text{bru}}$  (*brū*, speak), and in impf. fms., as *á-brav-ī-s*, *á-brav-ī-t* (2, 3 sg.) (id.); *ās-ī-s*, *ās-ī-t* (2, 3 sg.),  $\sqrt{\text{as}}$  (esse), etc.; *ghr-ī-tā-s* past part. pass.,  $\sqrt{\text{grah}}$  (grasp), has likewise this  $\bar{i}$ , which is therefore used just like *i*, only not so often.

The Vēd. *ās* for *\*ās-t* (acc. to a sound-law of Old-Ind., which must be discussed under ‘Consonants’), instead of later *ās-ī-t*, favours the view that  $\bar{i}$  is an auxil. vowel inserted at a later time.

*Note.*—Since beside *śvāp-i-mi* for *\*śvapmi*, etc., we see *śvāpāmi*, etc., we must simply suppose that here, as often elsewhere, beside the pres. st. *śvap-*, there was a pres. st. in *a*, *śvapa-*.

## GREEK.

## § 16.

## SUMMARY OF SOUNDS.

CONSONANTS.						VOWELS.	
MOMENTARY SOUNDS.			PROLONGED SOUNDS.				
	UNASPIRATED mute sonant <sup>1</sup>	ASPIRATED. mute	SPIRANTS. mute sonant <sup>1</sup>	NASALS. sonant <sup>1</sup>	r- & l-sOUNDS. sonant <sup>1</sup>		
Gutt.	κ γ	χ	‘	γ		a ā	} ε η
Pal.						ι ī	
Ling.					ρ λ		} ο ω
Dent.	τ δ	θ	σ	ν			
Lab.	π β	φ	(F)	μ		(ou)	

<sup>1</sup> Or medial.

§ 16. In this table only the indivisible sounds are mentioned.

ζ is a consonantal diphthong, namely *d* with the sonant dental spirant (e.g. Slavonian *z*). ψ, ξ, are only characters for two sounds πs, κs. The vowel-diphthongs are *ai*, *ei*, *oi*; *au*, *eu*, *ou* (older pronunciation); *υι*; also *α*, *η*, *ω* (older pronunciation, by which the *ι* was still heard); *āv* (perhaps in the word γρᾱῦς [γρῆς], perhaps pronounced distinctly from *av* with short *a*), *ηv*, *ωv*.

*Note 1.*—*v* at an earlier period of the language was equivalent to *u*, but became pronounced like *y*, *ü*, as early as classical times; *ou* in the earlier language was the genuine diphthong *ou*, but even in the classical period it had become equivalent to *ü*, as indeed it did in other languages, e.g. French, the older *ou* became *ü*, whilst the spelling retains the earlier sound-grade.

To pronounce Old-Greek after the fashion of modern Greek is a mistake, which arises from utter ignorance of the laws of development and phonology of a language.

We should be careful to distinguish *ai* from *ei* in pronunciation, because they are distinct sounds: they are pronounced as they are written, i.e. *ai* like German *ai* or *ei*, but *ei* like *e* + *i* tacked on, a diphthong, which is found dialectically in German, and characterized in other languages by *ey* (*ej*) (cf. Curt. Erl. § 8 sqq.).

*Note 2.*—Like most other written languages, the Greek does not characterize its long vowels throughout; in earlier Greek, however, they were not indicated at all: *α* serves as *a* and *ā*, *ι* for *i* and *ī*, *υ* for *ü* and *ū*, in the earlier writing *ε* for *e* and *ē* (*η*); *ο* for *o* and *ō* (*ω*). These incomplete indications of sounds have nothing to do with the language itself, *τες*, e.g., must be read *τῆς*, *τεῖ* = *τηι*, i.e. *τῆ*, *τοῖ* = *τωι*, i.e. *τῶ*, etc.; in all cases the long vowels are derived from the original language. Cf. 'Declensions.'

The system of Greek writing belongs to Greek special-grammar, as an appendix to the phonology.

§ 17. THE GREEK VOWEL-SYSTEM.

The most important deviation from the original language lies in the colouring of *a* into *e* and *o*, which takes place alike in the case of *a* and *ā* by the side of the original vowel pre-

served: the archaic dialects (Dôric) have remained most faithful § 17. to the older order of sounds: *o* has a double duty; it is not only 1. the representative of the original *a*, but also 2. (opposed to *ε=a*) the representative of the original *ā*.

Through the differentiation of *ā* into *o*, *ā*, *η*, *ω*, it became possible to separate *ω* as the second step from the first *o*, *a*, *η*.

The weakening of *a* into *ι* and *υ*, as well as loss of *a*, occurs comparatively seldom.

This same colouring of the *a*-sound into *e* and *o* occurs when it is combined with *i* and *u* in a diphthong; here too *ε (=a)* is the first, *o (=ā)* the second step, which however is replaced in the *u*-scale almost always by the first step (*ει, ευ*=original *ai, au*; *οι, ου*=original *āi, āu*). It is only wherever the language has lost the living variability of the vowels according to their scales, *αι* and *αυ* appear as steps raised from *ι* and *υ*.

A large number of vowel-sounds, especially diphthongs and long vowels, arise in Greek through the elision, permutation, and change of position of the original spirants *y, v, s*, which were entirely, or in certain combinations, unbearable to Greek pronunciation. The vowel-sounds so formed are consequently entirely unoriginal, being products of the peculiar sound-laws of the Greek language, and foreign to the original state of the language.

The Greek vowel-system, in many parts differing from the original one, reminds us in several respects of the Zend; whilst we find on the other hand the greatest conformity with that of the Latin language.

The vowel-scales of the Greek language are then as follows:

	Weakening.	Fundamental-vowel.	1st Step.	2nd Step.
<i>a</i> -scale	loss	<i>ι, υ</i>	<i>ε, ο, α</i>	<i>ο, ā, η</i> <i>ω</i>
<i>i</i> -scale			<i>ι</i>	<i>ει (αι)</i> <i>οι</i>
<i>u</i> -scale			<i>υ</i>	<i>ευ (αυ)</i> <i>ου (āυ)</i>

*Note.*—More than one sound accordingly occurs here in different functions, as is the case with *i* and *u* in Sanskrit, and

§ 17. partly also in Zend. In the Greek, however, we meet with the ambiguity of the sounds for the first time to a greater extent; we may here therefore speak of it briefly. Besides the permutations shown above, *ι*=original *i* and *α*; *υ*=original *u* and *α*; *ο*=original *α* and *ᾱ*: that is, the diphthongs are ambiguous because they stand, sometimes for scale-sounds, sometimes for results of contraction, sometimes for protracted vowels. e.g. *ει* in *εἶμι* (*eo*, *ibo*), fundamental-form *ai-mi*, originally distinct from *εἰμί* (*sum*), from \**ἔσμι*, fund.-form *as-mi*; *εἰ* in *εἶπον* (*dixi*), fr. \**ἔεπον*, \**FeFεπον*, *√Fεπ*; *εἰ* in *εἶην* (opt. pres.) for \**ἔσγην*, f.f. *as-γᾱ-m*; *κτείνω* (*kill*) for \**κτενγω*; *οὔ* in *σπουδή* (*haste*; raised to *ευ* in *σπεύδω*, *√σπυδ*) is altogether different, as *οὔ* in *πούς* (*foot*) for \**ποδ-s*, f.f. *pad-s*; *οὔ* in *τούς* for *τους* (acc. pl. of *το-*), f.f. *tams*; *οὔ* in *νέου*, fr. \**νέοο*, for *νέοιο*, \**νεFοσγο*, f.f. *navasya* (gen. sing. masc. and n. fr. *neo-*, *young*); *οὔ* in *γουνός* for \**γονFος* (gen. sing. fr. *γόνυ*, *knee*):—similarly in the case of *οἰ*, *λοιπ-ός* (*remaining*), *√λοιπ*, but *μοῖρα* (*lot*, *fate*) for \**μορ-γα*, *√μερ* (*divide*); *οἷς*, fr. *δῖς* (*older form ὄFis*, *Lat. ouis*); *αἰ* in *αἶθω* (*burn*), *√ιθ*, but *μέλαινα* (nom. sing. fem. st. *μελαν-*, *black*) for *μέλανγα*, etc.

§ 18.

#### EXAMPLES.

##### 1. *a*-scale.

Weakening. Loss. e.g. *γί-γνο-μαι* (*become*) for \**γι-γέν-ομαι*, *√γεν*, original *gan*; *πί-πτ-ω* for \**πι-πετ-ω*, *√πετ*, original *pat* (*fall*); *ἔ-σχ-ον* (1 sing. aor.), fund.-form *a-sagh-am*, *√σεχ*, original *√sagh*; *ἔ-σπ-όμην* (1 sing. aor. *ἔπ-ομαι*), *√σеп* (*follow*), original *√sak*, etc.

There takes place not unfrequently a complete loss of an original *a* in the elements of stem-formation, e.g. *πα-τρ-ός*, *πα-τρ-ί*, from stem *πατέρ-* (*father*), original *pa-tar-*, thus stand for *πατέρ-ος*, *πατέρ-ι* (*Homeric*), f.f. *patar-as*, *patar-i*, etc.

Note.—Loss of initial *a* in Greek is not common, cf. *ἐσ-μέν* (*we are*), f.f. *as-mási*, Sansk. *s-más*, and *Lat. s-unus*; *εἶην*=\**ἔσγην*, f.f. *as-γᾱm*, Sansk. *s-γām*, *Lat. s-iēm*; *εὖ* (*εύ*) for \**ἔού*, f.f. *asu*, Sansk. *śū* (*well*).

2 The weakening of original *a* to *ι* (cf. Curt. Gk. Et., p. 641 sqq.) is not frequent or regular in roots, and occurs most often before two consonn., e.g. *ἰσ-θί*, f.f. *as-dhi* (2 sing. imper.),

✓*ēs*, origl. and Sansk. *as* (to be); *πίτ-νῆμι* beside *πετ-άννυμι* § 18. (spread out), cf. *pateo*; *πίτ-νέω* (fall), ✓*πετ*, Sk. *pat*; *κίρ-νῆμι* beside *κερ-άω*, *κερ-άννυμι* (mix); *τίκ-τω* (bring forth), ✓*τακ*, origl. ✓*tak*, cf. *ἔ-τεκ-ον*, *τέ-τοκ-α*; *ἵππος* for \**ἱκ-Φος*, Sk. *āc-vas*, Lat. *eq-uos*, f.f. *ak-vas*, ✓*ak* (run). The passing of original *a* into *i* is through intervening *e*, to which fact the examples cited bear witness.

This weakening of the fundamental *a* into *i* occurs regularly in the reduplicated form of the present, e.g. *τί-θη-μι*, Sk. and origl. *dā-dhā-mi*, ✓*θε*, Sk. and origl. ✓*dha* (place); *δί-δω-μι*, Sk. and origl. *dā-dā-mi*, ✓*δο*, Sk. and origl. *da* (give); *γί-γν-ομαι*, ✓*γεν*, origl. *gan* (bring forth); *πί-πτ-ω*, ✓*πετ*, origl. *pat* (fall). This *i* (weakened from *a*) occurs lengthened to *ī*, e.g. in *πί-νω* (drink), ✓*πο* (*πό-σις*, *πο-τήριον*, *πέ-πω-κα*), origl. *pa*; *παρθεν-οπ-ίπ-ης* (looker-at-maidens), cf. *ὀπ-ωπ-ή* (sight), ✓*ὀπ*, origl. *ak* (see); *ῥσ-μῶν*, *ῥσ-μῶν* (loc. sing. moil), f.f. *yudh-manā*, *yudh-mani*, the latter to the st. *yudh-man-*, ✓*yudh* (join battle), suff. *man*.

Dialectically (in Dôric, Aiolic) this weakening of origl. *a* to *i* is more common; e.g. Dôr. *ἰσ-τία*, Iôn. *ἰσ-τήν*, for *ἑσ-τία* (hearth), origl. ✓*vas*; *ἰν* Arkad. and Kuprian for *ἐν* (in), related to the pronoml. stem *an*; Boiôtian *ἰών*=Iôn. *ἑών* for \**ἑσ-ων* (n. sing. masc. part. pres. act.), ✓*ἑσ-* (be), etc. Through the dulling of *a* to *o*, and further of *o* to *u*, a change of origl. *a* to *u* takes place.

This weakening of *a* to *u* (cf. G. Curt., p. 644 sqq.) occurs merely unconnectedly, in most cases through the influence of a nasal or *r*, *l*; and herein we must not forget that *u* represents an older *u*, so that in Greek we have the same weakening from *a* to *u* as in Lat. and German, etc., e.g. *νυκτ-ός* (gen. sing.), stem *νυκτ-* (night), (Sk. adv. *nākt-am*=*noctu*), Lat. stem. *noct-*: the root-vowel thus is *a*, and the root clearly ✓*nak* (necare, nocere); in *ὄνυξ* (stem *ὄνυχ-*, nail), root *νυχ*, cf. Goth. *nag-ls*, Sk. *nakh-ās*, etc., the origl. vowel is no doubt *a*; *γυνή* (woman),

§ 18.  $\sqrt{\gamma\alpha\nu}$  (bring forth), cf. Sk. *śān-a-s* (mensch), *śānī* (wife), Gothic *kven-s* (wife, spouse); *κύκλος* (ring), cf. Sk. *kakrá-m*; *μύλ-ος*, *μύλ-η* (mola),  $\sqrt{mal}$  fr. *mar*, cf. *mola*, *molere*, Lith. *malù*, Gothic *malan*; *ἄν-ώνυμος* (nameless) beside *ὄνομα* (name), f.f. *gnāman*, etc.

Dialectically this change is more frequently observed, esp. in Aiolic, e.g. *δυνμα*=*δνομα*; *ῥμοιος*=*ῥμοιος*, f.f. *samaias*, from stem *sam*=Gk. *όμο* (*όμός*, like), the origin of which is found in the pronoml. origl.  $\sqrt{sa}$ =Gk. *ό*; Aiolic locative *ἄλλυι*, *τῦιδε*, for *ἄλλοι* (*ἄλλο-*, other), *τοῖδε* (*το-* demonstr. pronoml. st.); Boiōtian *τύ* for *\*τυι=τοι* (n. pl. masc. same st.), *τῦς ἄλλυς*=*\*τυις ἄλλυις=τοῖς ἄλλοις* (dat. loc. pl.), by contraction of *υι* to *υ*.

*Note*.—I hold it inadmissible to separate from the rest those cases in which original *ka*, *ga*, become *κυ*, *γυ*, and to explain them collectively from *kva*, *gva*, with loss of *a*; neither will a fm. *\*κFακλος* seem to me to be Gk., and yet we must suppose some such form. No one, so far as I know, has had recourse to a fm. *\*νFαξ*, *\*ὀνFαξ*, *\*μFαλη*, in order to explain the *υ* in these words. Here *υ* must have arisen from *a* without passing through *va*, and the same process must have taken place after gutturals.

§ 19. Root-vowel *a* in the original language.

As a rule, *ε* is the representative of origl. *a* in roots; whilst *ο* generally takes its place in the stem-formative and word-formative particles, *a* is found in roots; in word-formative additions it is mostly dependent on a nasal now lost, but once in existence.

*ε*=*a*. *ἔδ-ω*, Sk. *ád-mi* (eat),  $\sqrt{\acute{e}d}$ , origl. *ad* (edo);  $\sqrt{\acute{e}d}$  in *ἔζ-ομαι*=*\*σεδ-γομαι* (sed-eo), *ἔδ-ος* (sed-es), origl. *sad* (sit);  $\sqrt{\gamma\epsilon\nu}$  in *γέν-ος* (gen-us), origl. *gan* (gi-gn-ere) of *gan-as*; *ἔσ-τι*, Sk. and origl. *ás-ti* ( $\sqrt{\acute{e}σ}$ , origl. *as*, esse); *φέρω*, Sk. and origl. *bhár-āmi*, *ἔφερ-ον*, Sk. and origl. *á-bhar-am*,  $\sqrt{\phi\epsilon\rho}$ , origl. *bhar* (ferre), etc. So also *ε* is common in elements of relation, e.g. st. *πα-τέρ-* (n. sing. *πατήρ*, father), origl. *pa-tar-*; st. *μη-τερ-* (n. sing. *μήτηρ*, mater), origl. *mātar-*; st. *μέν-εσ-* (n. sing.



μένος, might), Sk. and origl. *mán-as*; φέρ-ερε, Sk. *bhár-atha*; § 19. origl. evidently *bhar-a-tasi* (2 pl. pres. act.), etc.

*o*=*a*. ποδ-ός, Sk. and origl. *pad-ás* (g. sing.), st. and  $\sqrt{pad}$  (foot, go), where of course, in accordance with the sensibility of the Greek, the *o* may also be considered as a raised step from *ε* in *πεδ*; ὁ, τό, origl. and Sk. *sa, ta-t*, root and st. *sa, ta* (pron. dem.); πό-σι-ς (lord)=origl. and Sk. *pá-ti-s* (lord); μέν-ος (n. acc.), μέν-ους (gen. sing.) for \**μένεσ-ος*, Sk. and origl. *mán-as, mán-as-as*; similarly in *a*-stems, *a* changes to *o*, as *νέFo-ς* (n. sing. masc.), *νέFo-ν* (acc. sing.)=Lat. *nouo-s, nouo-m*, Sk. and origl. *náva-s, náva-m*, etc.

Dialectically *o* takes the place of *a*. Aiolic βροχέως for βραχέως (adv.), from st. βραχύ- (brevis=breguis, short); Arkadian ἐκοτόν for ἐκατόν (100), f.f. of -κατον is *kata-m* or *kanta-m*, cf. Sk. *ḡatá-m*; Kuprian κόρζα=καρδία (heart), cf. Lat. *cord-*, f.f. of this stem is *kard-*; st. τεκταν- in τέκταινα, i.e. \*τεκτανυα (fem.), τεκταίν-ομαι (build), i.e. \*τεκτανυομαι stands by the form τέκτον- (n. sing. τέκτων, builder), f.f. *taktan-*; the older *a* is preserved in the Dôric *ἑίκατι* for the newer Attic *εἴκοσι* (twenty), f.f. of the second part of the word is *(da)kati*; in *δια-κάτιοι* for *διακόσιοι* (200), -κατιοι is derived from an origl. stem *kata-* or *kanta-* (100).

*a*=*a*. ἀκ-ωκ-ή (point), st. ἄκ-οντ- (n. ἄκων, dart), origl.  $\sqrt{ák}$  (Lat. *ac-, ac-utus*); ἄγ-ω (lead)=Lat. *ago*, Sk. *áj-āmi*, origl.  $\sqrt{ag}$ ; ἄχος (grief), ἄχ-νυμαι (am grieved), origl.  $\sqrt{agh}$ ; ἑ-λαχ-ύς (little), Sk. *lagh-ús* (old *ragh-ú-s*) (light); πλατύ-ς (broad, wide), Sk. *prthū-s*, origl. *pratu-s*; λα-μ-β-άνω (take), ἔ-λαβ-ον, Sk. *á-labh-am*,  $\sqrt{lab}$ , Sk. *labh-* (get); δάκ-νω (bite), ἔ-δακ-ον, cf. Sk. *dág-āmi*, f.f.  $\sqrt{dak}$ ; ἔ-λακ-ον (I spoke), cf. Lat. *loq-uor*, Sk. *láp-āmi* (cry out),  $\sqrt{lak}$ , origl. *rak*; st. πα-τέρ- (father)=Lat. *pá-ter-*, origl. *pa-tar-*,  $\sqrt{pa}$  (protect).

*a* stands beside *ε*, e.g. ἔ-ταμ-ον beside ἔ-τεμ-ον (τέμ-νω, cut), in ἔ-τραφ-ον, ἔ-τραπ-ον, ἔ-κταν-ον beside τρέφ-ω (cherish), τρέπ-ω (turn), κτείν-ω (kill) (=κτεν-γω). We cannot trace herein a

§ 19. step from *ε* to *α*, but only a vowel-colouring, originally merely dialectic, which indeed was used in \*Greek for the purpose of expressing the relation of the aorist. As *ἐ-ταμ-ον* is to *ἐ-τεμ-ον*, so are the present forms *τέμνω*, *τρέφω*, *τρέπω* to the Dôric *τάμνω*, *τράφω*, *πράπω*, which we have to consider as the presents corresponding to the aorists *ἔταμον*, *ἔτραφον*, *ἔτραπον*; *κρείσσω* (better) (i.e. \**κρετ-γων*) beside *κράτ-ιστος* (best). Cf. Dôric *ā*=Iôn. Attic *η*.

*a*=*a*+nasal. *πόδα* (acc. sing.), Sk. and origl. *pád-am* (ped-em), *πόδ-ας*, Sk. *pád-as*, origl. *padam-s*; *φέρουν-τα*, Sk. and origl. *bhāran-tam* (feren-tem), *φέρουντ-ας*, Sk. *bhārant-as*, origl. *bharant-ams* (acc. pl. ferent-es); *ἐπτά*, Sk. and origl. *saptán* (septem); *δέκα*, Sk. *dācan*, origl. *dakan* (decem); *-σα* (1 sing. aor. in comp.) =Sk. and origl. *-sa-m*, cf. *ἔ-δειξα* (=ἔ-δεικ-σα) and Sk. *á-dik-ṣa-m*, *√diṣ*, origl. *dik* (show).

§ 20. Step-formation in the *a*-scale. Rule for the first step is: radical *ε* is raised to *ο*, *α* to *ā* (i.e. *η*). There are, however, exceptions to this rule.

1. *ε*:*ο*. *φόρ-ο-ς* (tax), *φορέω* (bear (durative), wear)=Sk. and f.f. *bhār-a-s* (burden), *bhār-āyāmi* (causat.) beside *φέρ-ω*, Sk. and f.f. *bhār-āmi* (fero); *φόχ-ο-ς* (waggon), Sk. *vah-a-s*, f.f. *vāgh-a-s* (waggon), *√Fεχ*, Sk. *vah*, origl. *vagh* (vehere), which, however, as a verb becomes intermixed with *√σεχ*, Sk. *saḥ* (have, hold); *μέ-μον-α* (strive), f.f. *ma-mān-a*, beside *μέν-ος* (might), Sk. and f.f. *mān-as*, *√μεν*, origl. *√man* (think); *γουν-ή* (birth), *γόν-ο-ς* (thing born, bairn), *γέ-γον-α*, f.f. *ga-gān-a*, Sk. *gāgāna*, beside *ἐ-γεν-όμην*, *γέν-ος* (genus), Sk. *gān-as*, f.f. *gan-as*, *√γεν*, origl. *√gan* (gi-gn-ere); *τόκος* (thing born, bairn), *τοκ-εύ-ς* (parens), beside *τεκ-έσθαι*, *τίκ-τω*, *√τεκ* (produce); *τέ-τροφ-α* beside *τρέφ-ω*, *ἐ-τράφ-ην*, *√τρεφ* (nourish); *ἔ-κτον-α* beside *κτείν-ω* (i.e. \**κτεν-γω*), *ἔ-κταν-ον*, *√κτεν* (kill); *εἴ-λοχ-α*, *λόγ-ος*, beside *λέγω*, *√λεγ* (legere); *ἔ-φθορ-α*, *φθορ-ά*, beside *φθείρω*, i.e. \**φθερ-γω*, *√φθερ* (destroy); *ὄψ* (voice), i.e. *φόπ-ς*, origl. *vāk-s*, Sk. *vāk* for \**vāk-s* (cry), beside *φέπ-ος* (word),

origl. *vāk-as*, Sk. *vaḥ-as*, origl.  $\sqrt{vak}$  (cry); γόν-υ, gen. γόνατος, § 20. older (Iōn.) γούνατος=*\*γονῆατος*, γουνός=*\*γονῆος*, cf. Sk. *gānu* (genu); ὄ-νο-μα, older (Hom.) οὔ-νο-μα (name), from ὄ-γνο-μα, cf. Lat. *gno-men*, (Sk. *nām-an*, also, with root-vowel raised).

In Greek, on account of the prosodic quantity of *o*, this step is possible only before two consonants, e.g. δέδορκα=Sk. *da-dārḥ-a*, origl. *da-dark-a*, beside δέρκ-ομαι, ἔ-δρακ-ον,  $\sqrt{δερκ}$ , origl. *dark* (see).

*Note.*—The same kind of step-formation of *e=a* to *o=ā* occurs in Latin, also in Slavonic, e.g. O.-Bulg. *vez-a*=original *vagh-āmi*, Lat. *ueho*, bes. *voz-ŭ*=original *vāgh-a-s*, Gk. *Φόχ-o-s*, v. infr.

2. *a:ā*, *η*. two equivalent sounds. e.g. λέ-ληκ-α, λέ-λᾱκ-α, beside ἔ-λακ-ον,  $\sqrt{λακ}$  (cry out), cf. Sk. *lap*, origl. *raḥ*; κέ-κληγ-α beside ἔ-κλαγ-ον, κλάζω=*\*κλαγ-γω*,  $\sqrt{κλαγ}$  (sound); λέ-ληθ-α, Dōr. λέ-λαθ-α, λήθη (forgetfulness), beside ἔ-λαθ-ον, λα-ν-θ-άνω,  $\sqrt{λαθ}$  (escape notice); εἴ-ληχ-α beside ἔ-λαχ-ον, λα-γ-χ-άνω,  $\sqrt{λαχ}$  (get by lot); δέ-δηχ-α beside δάκ-νω, ἔ-δακ-ον,  $\sqrt{δακ}$  (bite); εἴ-ληφ-α, λήψ-ις (i.e. ληπ-σις=ληβ-τις), beside ἔ-λαβ-ον, λα-μ-β-άνω,  $\sqrt{λαβ}$  (take); κέ-κράγ-α beside κράζω, *\*κραγ-γω*,  $\sqrt{κραγ}$  (cry aloud); ἔ-ᾠγα, Iōn. ἔ-ηγ-α, i.e. *Fe-Fāγ-a*, f.f. *va-vāg-a*, beside ᾄγ-νυμι,  $\sqrt{Faγ}$  (break); st. μῆ-τερ-, origl. and Sk. *mā-tar-*, etc.

In elements belonging to the formation of words, *o* will be found raised to *η*, *ā*: this rule is observed regularly in the stem-termination *o=a* in such stems as are raised in the feminine termination, e.g. νέο-ς (n. sing. masc.), νέο-ν (n. sing. neut.), origl. and Sk. *nāva-s*, *nāva-m* (nouo-s, nouo-m), but fem. νέ-α, Iōn. νέη=origl. and Sk. *nāvā* (noua). In ἦ, 'ā, origl. and Sk. *sā*, beside ὄ, origl. and Sk. *sa* (pron. demonstr.), and other pronominal stems, is found radical *o* raised to *η*, *ā*, the root being equivalent to the stem as often.

*Note 1.*—*μέ-μηλ-α* beside μέλ-ει,  $\sqrt{μελ}$  (be a care to), shows also the raising of *e* to *η*.

§ 20. *Note 2.*—Sometimes  $\bar{a}$  is shortened to  $\tilde{a}$ , e.g. *Ῥάστν* (city), Sk. *rās-tu* (house), Sk. and original  $\sqrt{ves}$  (inhabit); similar shortenings often occur in the *a*-termn. of feminine stems.

*Note 3.*—The laying-down of the laws for the use of  $\bar{a}$ ,  $\eta$ , belongs to the special-grammar of Greek: the Dôric predilection for the more ancient  $\bar{a}$  and that of Iônia for  $\eta$  are well known. In Attic likewise  $\bar{a}$  changes to  $\eta$ , yet *a* repeatedly occurs, owing to the surrounding sounds, especially in the case of  $\rho$ ,  $\epsilon$ ,  $\eta$ ,  $\iota$ ,  $\gamma$  (i.e.  $\zeta$ ,  $\sigma\sigma$ ,  $\lambda\lambda$ , etc.), preceding, and  $\epsilon$ ,  $\eta$ , following, when its change to  $\eta$  is stopped.

For the second step we have  $\omega$  in examples such as  $\epsilon\rho\text{-}\rho\omega\gamma\text{-}\alpha$ ,  $\rho\acute{\omega}\xi$ ,  $\rho\omega\gamma\text{-}\acute{\omicron}\varsigma$  (cleft), beside  $\rho\acute{\eta}\gamma\text{-}\nu\mu\iota$ ,  $\sqrt{Frag}$  (break), cf. Goth. *brak*, Lat. *frag*;  $\pi\tau\acute{\omega}\xi$ , i.e.  $\pi\tau\acute{\omega}\kappa\text{-}\varsigma$ , gen.  $\pi\tau\omega\kappa\text{-}\acute{\omicron}\varsigma$  (cowering),  $\pi\tau\acute{\omega}\sigma\sigma\omega$ , i.e.  $^*\pi\tau\acute{\omega}\kappa\text{-}\gamma\omega$  (cower), beside  $\pi\tau\acute{\eta}\sigma\sigma\omega = ^*\pi\tau\acute{\eta}\kappa\text{-}\gamma\omega$ ,  $\epsilon\text{-}\pi\tau\alpha\kappa\text{-}\omicron\nu$ ,  $\sqrt{\pi\tau\alpha\kappa}$  (cower), clearly a further formation from  $\sqrt{\pi\tau\alpha}$ , cf.  $\pi\epsilon\text{-}\pi\tau\eta\text{-}\kappa\acute{\omega}\varsigma$ ;  $\acute{\alpha}\rho\omega\gamma\text{-}\acute{\omicron}\varsigma$  (helper) beside  $\acute{\alpha}\rho\acute{\eta}\gamma\text{-}\omega$  (I help). From these examples we gather an equation  $\eta:\omega::\epsilon:o$ .

Also where there is no parallel first step to  $\omega$ , we must hold it to be in the position of a second step, e.g.  $\tau\rho\acute{\omega}\gamma\text{-}\omega$  beside  $\epsilon\text{-}\tau\rho\alpha\gamma\text{-}\omicron\nu$ ,  $\sqrt{\tau\rho\alpha\gamma}$  (gnaw, chew);  $\delta\delta\text{-}\omega\delta\text{-}\alpha$  beside  $\delta\acute{\zeta}\omega = ^*\delta\delta\text{-}\gamma\omega$ ,  $\delta\delta\text{-}\mu\acute{\eta}$ ,  $\delta\sigma\text{-}\mu\acute{\eta}$ ,  $\sqrt{\delta\delta}$  (smell);  $\acute{\omega}\kappa\text{-}\acute{\upsilon}\varsigma =$  Sk.  $\acute{a}\zeta\text{-}\acute{\upsilon}\varsigma$ , origl.  $\acute{a}\kappa\text{-}\acute{\upsilon}\varsigma$  (sharp),  $\acute{\alpha}\kappa\text{-}\omega\kappa\text{-}\acute{\eta}$  (point),  $\sqrt{\acute{\alpha}\kappa}$ , cf.  $\zeta\pi\pi\omicron\varsigma$  (equos), origl.  $\acute{a}\kappa\text{-}\acute{\upsilon}\varsigma$ ;  $\acute{\omega}\text{-}\acute{\omicron}\nu$ , better  $\acute{\omega}\acute{\omicron}\nu$  (Sappho,  $\acute{\omega}\iota\omicron\nu$  acc. to Ahrens,  $\acute{\omega}\beta\epsilon\omicron\nu$  Hésuch.), origl.  $\acute{\alpha}\nu\gamma\alpha\text{-}\mu$  (ouom, *lit.* bird-, of a bird), from origl.  $\acute{a}\nu\iota\text{-}\varsigma$ , Sk.  $\acute{v}\iota\text{-}\varsigma$  (auis);  $\acute{\alpha}\gamma\text{-}\omega\gamma\text{-}\acute{\eta}$  (leading),  $\acute{\alpha}\gamma\text{-}\omega\gamma\text{-}\acute{\omicron}\varsigma$  (leader), beside  $\acute{\alpha}\gamma\text{-}\alpha\gamma\text{-}\epsilon\iota\nu$ ,  $\acute{\alpha}\gamma\text{-}\epsilon\iota\nu$  (lead);  $\delta\acute{\iota}\text{-}\delta\omega\text{-}\mu\iota$  beside  $\delta\acute{\iota}\text{-}\delta\omicron\text{-}\mu\epsilon\nu$ ,  $\sqrt{\delta\omicron}$  (dare);  $\epsilon\delta\text{-}\omega\delta\text{-}\acute{\eta}$  (food),  $\sqrt{\epsilon\delta}$ , Lat. *ed*, origl. and Sk. *ad* (eat);  $\gamma\upsilon\omega\text{-}\tau\acute{\omicron}\varsigma$  (known),  $\gamma\iota\text{-}\gamma\upsilon\acute{\omega}\text{-}\sigma\kappa\omega$  (learn, come to know), cf. Lat.  $(g)n\acute{o}\text{-}tus$ ,  $(g)n\acute{o}\text{-}sco$ ,  $\sqrt{gna}$ , from *gan*.

*Note.*—Dialectically *ou* occurs for  $\omega$ , i.e.  $\bar{u}$ , in isolated instances (a weakening which occurs also in Lat.).  $\omega:ou(\bar{u}):o:v(u)$ , e.g. Thessal.  $\gamma\upsilon\acute{\omicron}\mu\alpha = \gamma\upsilon\acute{\omega}\mu\eta$  (insight, opinion),  $\sqrt{\gamma\upsilon\omicron}$ , original *gna* = *gan* (learn);  $-ou\upsilon = -\omega\nu$ , fund.  $-ām$  in gen. pl., cf. Lat. *-um*, etc.

§ 21. 2. *i*-scale.

Root-vowel *i*.  $\acute{\iota}\text{-}\mu\epsilon\nu$ ,  $\acute{\iota}\text{-}\theta\iota$ , Sk. *i-más-i*, *i-hi*, origl. *i-masi*, *i-dhi*,  $\sqrt{i}$  (ire);  $\epsilon\text{-}\lambda\iota\pi\text{-}\omicron\nu$ ,  $\sqrt{\lambda\iota\pi}$ , Lat. *lic*, Sk. *rik*, origl. *rik* (leave);  $F\acute{\iota}\delta\text{-}\mu\epsilon\nu$

=Sk. and origl. *vid-mási*, st. *Fίσ-τορ*- [n. sing. *ἴσ-τωρ* and *ἴσ-τωρ* § 21. (knower, witness)], for \**Fιδ-τορ*-, f.f. *vid-tar*,  $\sqrt{\text{vid}}$  (know);  $\xi$ -*πιθ-ον*,  $\xi$ -*πιθ-όμην*, *πίσ-τις* (faith), for \**πιθ-τις*,  $\sqrt{\text{πιθ}}$  (persuade), and element of stem-formation *τι*; *σχιδ-η* (splinter), *σχίζω* (split) = \**σχιδ-γω*,  $\sqrt{\text{σχιδ}}$  = Sk. *khid*, Lat. *scid*, origl. *skid* (scindere);  $\delta$ -*μιχ-εῖν*,  $\sqrt{\text{μιχ}}$  = Sk. *mih*, origl. *migh* (mingere); *λίχ-νος* (daintiness), *λιχ-μάω*,  $\sqrt{\text{λιχ}}$ , Sk. *lih*, *rih*, Lat. *lig*, origl. *rih*; *στίχ-ος* (rank),  $\xi$ -*στιχ-ον*,  $\sqrt{\text{στιχ}}$  (march, tread), Goth. *stig*, Sk. and origl. *stigh*; *τις*, fund. *ki-s*, Lat. *qui-s*, Goth. \**hi-s*, pronl. root, origl. *ki* (dem. and interrog.), etc.

Lengthened *i* is a parallel form to *i* (often depending on fixed proportion of sound), e.g. Hom. *ἴ-ομεν* and *ἴ-ομεν* beside *ἴ-ωμεν* (1 pl. pres. conj.), origl. *i-a-mas*,  $\sqrt{i}$  (ire); *ἰδ-ος* (ntr. sweat), *ἰδ-ίω* (I sweat),  $\sqrt{i\delta}$ , origl. *svid*, cf. Sk. *srid-yāmi*; *πί-νω* (*πίνω*), *πιθι*, beside  $\xi$ -*πι-ον*,  $\sqrt{\text{πι}}$  (drink), cf. Sk. *pī* beside *pa*.

*i* raised by steps.

§ 22.

1. *i* raised to *ei*; e.g. *εἶ-μι* (go), Sk. *é-mi*, origl. *ai-mi*,  $\sqrt{i}$ ; *πείθ-ω* (1 sing. pres.),  $\sqrt{\text{πιθ}}$ , so *λείπ-ω*,  $\sqrt{\text{λιπ}}$ ; *λείχ-ω*, origl. *raigh-āmi* (1 sing. pres.),  $\sqrt{\text{λιχ}}$ , origl.  $\sqrt{\text{rih}}$ ; *στείχ-ω*, origl. *staigh-āmi*,  $\sqrt{\text{στιχ}}$ ; *Φεῖδ-εται*, *εἰσομαι* (for \**Φεῖδ-σομαι*), *Φεῖδος* (ntr. outward-form),  $\sqrt{Fιδ}$ ; *εἰκ-ών* (likeness) beside  $\xi$ -*ικ-τον*,  $\xi$ -*ικτην*,  $\sqrt{Fικ}$ , clearly (=resemble); *κεῖ-ται* (3 sing. pres. med.) = Sk. *ḡ-tē*,  $\sqrt{ki}$  (lie), etc.

*ai* occurs in the main perhaps only as a lifeless step-formation where the language has lost all sense of the derivation, and hence for the most part no *i*, *ei*, or *oi*, is parallel to *ai*, e.g. *αἶθ-ω* (I kindle), *αἶθ-εσθαι* (burn), *αἶθ-ήρ*, *αἶθ-έρος*, (aether), *αἶθ-ουσα* (porch), cf. Lat. *aed-es*, *aed-ilis*,  $\sqrt{i\theta}$  = Sk. *idh*, *indh* (burn), Germ. *it*, in O.H.G. *eit* (fire); *αἶ-Φών*, origl. *ai-vān-s* (time, long time), cf. Lat. *ae-uo-m*, origl. *ai-va-m*, Sk. *é-va-s*, origl. *ai-va-s* (a going), Goth. *aiv-s*, f.f. *ai-va-s* (time, long time), with other step-forms,  $\sqrt{i}$  (go), with sf. *van*, *va* (here the language no longer felt the connexion with *ἴ-μεν*, *εἶ-μι*, *οἶ-μος*); *καί-ρός* (point of time), cf. Goth. *hvei-la* (hour, time, Engl. 'while'), origl. *kai-rā*, origl.  $\sqrt{ki}$ .

§ 22. *Note*.—In medial terms., e.g. φέρο-μαι, \*φερε-σαι, φέρε-ται, φέρον-ται, *αι* is not a step-form, but the product of a contraction from f.f. *bharā-mami*, *bhara-sasi*, *bhara-tati*, *bhara-ntanti*, v. sub. 'Conjugation.'

2. *i* raised to *οι*, e.g. οἶ-μος, οἶ-μη (road, a going), cf. αἶ-Φών, εἶ-μι, ἵ-μεν, √ι (go); πέ-ποιθ-α beside πείθ-ω, √πιθ (ἐ-πέ-πιθ-μεν); λέ-λοιπ-α, λοιπ-ός (left, remaining), beside λείπ-ω, ἔ-λιπ-ον, √λιπ; Φοῖδ-α (know)=Sk. *véd-a*, with the 1st, Goth. *vait* with 2nd step, beside *Fēd-os*, √*Fiδ* (*Fīδ-μεν*); ἔ-οικ-α (seem) beside εἰκ-ών, for *FéFoικα*, √*Fικ*, (ἔ-ικ-τον, ἐ-ίκ-την); Φοῖκ-ο-ς (house), cf. Sk. *vēḥ-a-s*, Lat. *uic-u-s*, i.e. \**ueic-o-s*, with 1st step, √*Fικ*=Sk. *viḥ*, origl. *vik* (settle); Φοῖν-ο-ς (wine), cf. Lat. *uin-um*, Germ. *wein* with 1st step; λοιβ-ή (lib-atio) beside λείβ-ω (pour), and λίβ-ο-ς (drop), λιβ-άς, -άδ-ος (moisture), √λιβ; στοῖχ-ος (rank) beside στείχ-ω, ἔ-στιχ-ον, √στιχ; αἵματο-λοιχ-ός (blood-licking) beside λείχ-ω, λίχ-νος; κοίτ-η (bed), κοι-μάσθαι (sleep), beside κεί-ται, √*kī*, etc.

*Note*.—In opt. φέρ-οις (etc.)=fund. *bhar-ai-s*, also in nom. pl. e.g. οἶ, original *sai* (*taī*), *οι* is the result of a contraction, not a step of a vowel-scale; v. 'Conjugation and Declension.'

§ 23. 3. *u*-scale.

Radical *u*, e.g. ἔ-φυγ-ον, φυγ-ή (fug-a), √φυγ, Sk. *bhug* (*bhug-ná-s*, bent), Goth. *bug* (bend), Lat. *fug* (only here and in the Greek with a narrower sense); ζυγ-όν (yoke)=Lat. *iug-um*, Sk. and origl. *yug-ám*, √*yug* (join, iungere); ἐ-ρυθ-ρός (red)=Sk. *rudh-irá-s*, f.f. *rudh-ra-s*, √*ῥυθ*, origl. and Sk. √*rudh*, Goth. *rud* (be red), etc.; σύ, τό (thou, du), cf. Sk. *tv-am*, Lat. *tu*, Lith. *tu*, Slav. *ty*; κλύ-ω (hear), √κλυ, Sk. *ḥru*, Goth. *hlū* (Eng. *loud*, *lud*=voice), origl. *kru*; ῥυ-τός (flowing), √*ῥυ*, Sk. and origl. *sru* (flow), so ἐῤῥύ-ην=\*ἔ-σρυ-ην, Germ. *stru* (in *ström*, *stream*, with inserted *t*); φύ-ω (am), φύτ-ον (being), √φϋ, Sk. *bhu*, Lat. *fu*, origl. *bhu* (be); κέ-χυ-μαι (perf.), √χϋ, Goth. √*gu-t* (pour) (with a *t* for further formation); ἔσ-συ-μαι, (pf.), σύ-το (aor.), √συ (rush); ὤκ-ύ-ς=Sk. *āḥ-ú-s*, origl. *āk-u-s*

(sharp); πλατ-ύ-ς, Sk. *prthús*, origl. *prat-u-s* (broad), sf. *u*; § 23. ἄσ-τυ (city)=Sk. *vās-tu* (house); βοη-τύ-ς (shout), μάρ-τυς (witness), etc., with sf. -τυ, Sk., Lat., origl. *tu*. The lengthening of *υ* to *ῡ* is not uncommon, e.g. ὑδωρ, cf. Sk. *ud-a-m*, *ud-aká-m*, Lat. *unda*, with inserted nasal, Sk.  $\sqrt{ud}$  (be wet); κλῡ-θι (imper. aor.)=Sk. *ḥru-dhí*, origl. *kru-dhi*, cf. κέ-κλῡ-θι, κλῡ-τός,  $\sqrt{κλν}$ , origl. *kru* (hear); πέ-πνῡ-μαι, πε-πνῡ-μένος (prudent),  $\sqrt{πνν}$  (blow); ξῡ-ω,  $\sqrt{ξν}$  (shave); ὕς and σῡς (swine), cf. Lat. *sūs*, Sk. *sū-kara-*, O.H.G. *su*,  $\sqrt{su}$ ; δρῡ-ς (tree), Goth. *triu* (arbor). We cannot decide with any certainty where origl. *au* stands as a lengthening for a root-vowel, and where it stands for a step of a vowel-scale. In the last-mentioned examples perhaps originally a step-form was in existence.

*Note 1.*—The older sound *u* has been kept in Boiōt. (τού=σύ, κούνες=κύνες, etc.), and in diphth. *au*. The later *υ*=*ü* occurs proportionately early, however. The same transition of sound occurs also in other languages. Lat. *una* became Fr. *une*, pronounced *ün*.

*Note 2.*—In Greek as well as in Umbr., *ι* occurs as a weaker representative form of *υ*. In mod. Gk. it is well known that *υ* has universally become *ι*. So φῑ-τυ-ς (father, begetter), φῑ-τύ-ω (beget)=Lat. *fu-tu-o*,  $\sqrt{φν}$ , original *bhu*; δρί-ον, also δρί-ος (forest), and δρῡ-ς (tree), cf. Sk. *drū-*, masc. n. wood, m. tree), Goth. *triu* (tree); σῑ-αλο-ς (hog) and σῡς. Curt. Gk. Et.<sup>2</sup> p. 647 sqq.

#### Step-formation of *u*.

§ 24.

1. step *ευ*, e.g. φεύγ-ω (flee), πέ-φευγ-α,  $\sqrt{φνγ}$ ; ἐλεύ[θ]-σομαι (shall come),  $\sqrt{ἐλνθ}$  in ἡλυθον=\*ἐ-ελνθ-ον; κλέF-ος=Sk. *gráv-as* (fame), origl. *krav-as*,  $\sqrt{κλν}$ ; πλέF-ω (sail)=Sk. and origl. *pláv-āmi*,  $\sqrt{πλν}$ ; ῥεύ-μα (stream), ῥεύ-σομαι, ῥέF-ω (flow)=Sk. and origl. *sráv-āmi*,  $\sqrt{ρν}$ , origl. and Sk.  $\sqrt{sru}$  (flow); πνεῦ-μα (breath), πνεύ-σω, πνέF-ω (blow),  $\sqrt{πνν}$ ; σεύ-ω (rush),  $\sqrt{σν}$ ; χέF-ω (pour),  $\sqrt{χν}$ ; ξέF-ω (I scrape),  $\sqrt{ξν}$ ; Ζεύ-ς (nom. propr. God), for \*δγευ-ς, in Sk. with 2nd step *dyāu-s* (heaven), in the other cases from  $\sqrt{div}$ ,  $\sqrt{διF}=dyu$ , \*δγν, ζν, etc.

*au* is here too a lifeless step-formation, e.g. αῦ-ω for \*αῦσ-ω

§ 24. (kindle), *ἔν-αυσ-μα* (tinder), cf. *εὔ-ω*, Lat. *uro*=\**ous-o*, \**eus-o* (see Lat. 'Vowels'), Sk. *ḍś-āmi*, \*origl. *aus-āmi*, √*uś*, origl. *us*; *αὐγ-ή* (glance), √*ύγ*, cf. Sk. *ḍgas* (force); *αὐξ-άν-ω*, i.e. \**αὐγ-σανω* (make to grow), cf. Lat. *aug-eo*, √*ug* (which occurs pure in Lith.).

2. Second step *ou* occurs seldom, espec. when *u* is medial (no \**πε-φουγ-α*=Goth. *baug*,=\**bu-bāuga*, like *λέλοιπα*), while we find it compensated for by the first step, yet cf. *εἰλήλουθα* (Hom.) from √*ἐλυθ*, cf. *ἦλυθον* and *ἐλεύ(θ)σομαι* [origl. √*ἐλ*=*ἐρ*, origl. *ar* (go), in *ἔρ-χομαι* (come, go), f.f. *er-skomai*, further formed in Greek by sf. *υ* (*προς-ήλυ-τος* *ἔπ-ηλυσ*, newly come), to which is added the frequent accompaniment of a verb-stem *θ* (v. sub. 'Formation of Present-stem'); the secondary √*ἐλυθ* so formed sts. was treated as if the √vowel was really *υ* (exx. in text), sts. is merely equivalent to an auxiliary vowel (§ 29), which moreover may disappear, *ἦλθον*]; *ἀ-κόλουθος* (follower), and *κέλευθ-ος* (way); *ρόυς-ιος* (reddish), for \**ρουθιος* (or perhaps \**ρουθ-τιος*, \**ρουθ-σιος*?), beside *ἐ-ρεύθ-ω* (blush), and *ἐ-ρυθ-ρός* (red); *σπουδ-ή* (haste) beside *σπεύδ-ω* (hasten); *λοῦσσον*=\**λουκ-γον* (white pith of deal), cf. *λευκ-ός* (white), *ἀμφι-λύκ-η* (twilight), *λύχ-νος*. More often beside final *u*, e.g. *πνοF-ή* (blast) beside *πνέF-ω*, √*πνυ*; *ροF-ή*, *ρόF-ος* (stream), beside *ρεύ-μα*, √*ρυ*; *χοF-ή* (outpouring) beside *χέF-ω*, √*χυ*; *πλόF-ος* (voyage) beside *πλέF-ω*, √*πλυ*; *θόF-ος* (swift) beside *θέF-ω*, √*θυ*, Sk. and origl. *dhu*; *ξοF-ις* (chisel), *ξόF-ανον* (carved-work), beside *ξέF-ω*, √*ξυ*; *σόF-ος* (quick motion), *σοῦ-μαι*=\**σοF-ομαι* (Trag. haste), beside *σεύ-ω*, √*συ*.

In separate instances also *av* (*āv*) is a second step fr. *u*, e.g. *ναῦς* (nauis) (i.e. *νāῦς* on acct. of *νηῦς*)=Sk. *nāu-s*, Iôn. *νηF-ός*, Dôr. *νāF-ός*, Sk. *nāv-ās*, point to √*nu*.

*ου* is only Iôn.=*av*, e.g. *θωῦ-μα* (wonder)=*θαῦ-μα*, *θέFa*, *θεFά-ομαι* (show, gaze), point to √*θυ*.

*ω* also occurs sts. as second step from *υ*, e.g. *ζω-μός* (broth), cf. *ζύ-μη* (yeast), Sk. *yū-śa-m*, Lat. *iū-s*, similarly belonging to



✓*yu*, Gk. ζυ (with which ζέ-ω (cook) for \*ζεσ-ω, cf. ἔ-ζεσ-μαι, § 24. ζεσ-τό-ς, has no connexion, cf. O.H.G. ✓*jas*, cook); ζώ-ννυμι (gird), ✓ζυ, origl. *yu* (join); χώ-ννυμι, ✓χυ, χέω (pour). If we compare πλώ-ω for πλώ*F*ω, Ión. parallel-form to πλέ*F*ω, Dôr. βῶς=βούς=Sk. *gāus*, and Ión. ων=*au*, hence we infer in Greek a step-formn. *ou*, *ov*=origl. *āu*, *āv*, where the 2nd element has become assimilated to the first, so that only *ō*, *ω* (=ω*o*, *ou*) remains.

*Note 1.*—Cases such as οὐρανός-ς (heaven) beside Sk. *váruna-s* (name of a deity); οὐλ-ή (scar) beside Lat. *uolnus*, Sk. *vranam* and *vranas* (wound); εὐρύ-ς (wide) beside Sk. *urú-s* for \**varú-s*, show *ou*, *ev*, in place of the expected *fo*, *Fe*. The explanation of this is difficult; perhaps it is to be considered less as a transposition of *fo*, *Fe*, to *ou*, *ev*, than a shortening fr. original *va* to *u* and a step-formation from the latter.

*Note 2.*—There are three roots *θυ* in Gk.: 1. *θύω*, hasten; 2. *θύω*, offer; 3. in *θαῦμα*, *θεάομαι*, gaze.

*Note 3.*—All vowel-sounds which do not appear in the vowel-scales are therefore unoriginal products of the sound-laws (especially of contraction after the elision of consonants).

## SOUND-LAWS OF VOWELS.

## § 25.

The laws laid down in ordinary Greek grammars, i.e. the laws of contraction, etc., may be passed over as already understood.

At first sight we are struck by the frequently occurring hiatus which arises from elision of spirants *y*, *s*, *v*, and their vocalisation, and which is not by any means invariably obviated by contraction; thus arise forms such as Homéric *δηϊόφεν*, five vowels (together), 3 pl. opt. from *δηϊόω* (slay), fr. *δῆϊος* (hostile); *δῆϊος* evidently=\**δησιος*=Sk. *dāsya-s* (hostile), adjectival form in *ya*, fr. *dāsa-s* (demon, slave, originally 'foe'), whence \**dāsya-yā-mi* (= \**δησιο-γω-μι*, whence *δηϊόω*), of which 3 pl. f.f. *dās-ya-yai-nt*, in Gk. with superfluous unoriginal *ε* before personal termination, \**dāsya-yai-ant* as f.f.=*δηιο-οι-εν*, and in that case with *φ*=*ai*, in consequence of an unoriginal lengthening of *οι* to *ω*, comes *δηϊόφεν*. (Acc. to Aufrecht in Kuhn's Zeitschrift, vii. 312,

§ 25. sqq., *δήιος* proved to be Aiolic in *δάFιος* belongs to  $\sqrt{\delta\nu}$ ; f.f. accordingly of *δήιος*, *δηιόφεν* = \**dāya-s*, \**dāya-yai-ant*.) Diphth. *q*, *η*, *φ*, are only secondary products of contraction.

Whilst the termination (except a few instances, e.g. partial shortening of *ā* to *ǣ* in fem. and the like, cf. § 20) does not yet exercise a destructive influence on the vowels,—and also the vowels of syllables which follow medially upon one another (excepting the working of the *ι* of *σι* on the vowel of the preceding syllable) have no essential influence upon one another,—we perceive a variation of the older vowel-system, caused by consonantal influence,—a variation of considerable importance and characteristic of the language.

Important above all are the changes in consequence of the Greek distaste for the original and frequent Indo-European spirants *y*, *v*, *s*; *y* and *v* become *ι* and *υ*, *y* also becomes *ε*; *v* and *y* as *ι* and *υ* change position from a following to a preceding syllable; *y*, *v*, and *s*, further fall out from between two vowels. After the disappearance and softening of consonants, frequent vowel-lengthening takes place. A consonantal sound in the beginning of a word is not unfrequently accompanied by an introductory vowel-sound, and besides occurs the so-called vowel-insertion between two consonants.

§ 26a. Introduction of *i* into a preceding syllable in case of termn. *-σι*. e.g. (1.) loc. dat. pl. *ταῖσι*, Iōn. *τῇσι*, thence *ταῖς*, fr. \**tāsi* (pronoml. st. *ta* raised to *tā*, and loc. termn. pl. *si*), and also *τοῖσι*, *τοῖς*, fr. \**to-si*, \**tā-si* (although another explanation offers itself here, v. sub. 'Declension'). (2.) 2 sing. ind. and conj. act., e.g. *φέρεῖς* (indic.), fr. \**φερεῖσι*, \**φερε-σι*, f.f. *bhara-si*; *φέρῃς* (conj.), fr. \**φερῃσι*, \**φερῃσι*, \**φερῃσι*, f.f. *bharā-si*.

§ 26b. Vocalisation and transposition of *y* and *v*.

1. *y* changes to *ι* and *υ* to *υ*, e.g. original stem-formative particle *ya* = Gr. *ιο*; *πάτρ-ιο-ς* (paternal), cf. *patr-ius*, st. *πατέρ-*, cf. Sk. *pītr-ya-s*, origl. *patar-ya-s*; *ἅγ-ιο-ς* (holy), cf. Sk. *yaś-ya-s* (to revere); compar. suff. *-ιον*, origl. *-yans*, e.g. *ἡδ-ιον*, st.

ἡδ-ίον- (ἡδ-ύ-s, sweet), f.f. *svād-yāns*, st. *svād-yans-*, cf. ἐλάσσων §26b. for \*ἐλαχyon, f.f. *lagh-yāns* (ἐλαχ-ύ-s, small, f.f. *lagh-u-s*), in the latter of which instt. *y* as such has disappeared; pres.-st.-suff. origl. *ya*, e.g. ἰδ-ί-ω (sweat), f.f. *svīd-yāmi*, δα-ίω (kindle), fr. *da-yāmi*, cf. κράζω (howl), for \*κραγ-yω, with same suff. which here has retained *y*; in Dôr. fut. form. -σίω for \*σyω, origl. *syāmi*; in gen. sing. masc. neut. of *a*-stem, origl. -*asya* (Gr. with loss of *σ, οιο*), e.g. ἱππο-ιο fr. \*ικFσσ-yo=Sk. *ācvasya*, origl. *akra-sya*; optat. particle *ιη*, origl. and Sk. *ya*, e.g. εἶην for \*έσ-yη-μ=origl. *as-ya-m*, with *s* lost between two vowels; perf. part. act. fem. *υια* fr. origl. -*vant-yā*, -*vans-yā*, from the latter form with elision of *an* came \*-*vsyā*, hence -*usyā*=Gk. \*υσια=*υια*; δύο, δύω =\*δFω, cf. δώδεκα fr. \*δFωδεκα, Sk. and origl. *dva*.

*Note.*—Esp. in Lesbo-Aiolic *υ* between two vowels is preferred to be=*v*, e.g. χε-ύ-ω=χέFω (pour), √χv; so πνεύ-ω=\*πνέFω (breathe), √πnv; θεύω=θέFω (haste), √θv, etc.

2. Further, *ε* occurs sts. undeniably for *y* (not however for *v*, *F*) especially after consonants; in the cases from *y* there remains only the accompanying vowel-sound itself, as a short and indeterminate vowel which is nearly=*ε*, e.g. *ε=y* in fut. forms, πλευσούμαι, φευξοῦμαι=σέομαι, \*σγομαι, fund. f. -*syāmāi*; further in κενός (empty), Aiol. κέννος, both fr. \*κενyος, f.f. *kvanyas*, Sk. *ḥunyas*; ἐτεός (true)=Sk. *satyās*; στερεός (firm, solid) beside στερρός, f.f. \*στεργος, *staryas*, fem. στεῖρα, *staryā*; Epic ἡγορ-ήη=ἀνδρ-ία (manliness), f.f. of suff. is *yā* (st. ἀνέρ-, ἀνδρ-), n. sing. ἀνήρ (man).

*Note 1.*—In cases of declens., e.g. πόλεως, *ε* is not=*y*, but there was a step-raising of *ι* to *ει*, and the representative *y* was lost; e.g. πόλεως=πόλεος, fr. \*πολεγ-ος, st. πολι (city), f.f. *parai-as*, st. *pari*.

*Note 2.*—Original *v* also does not change to *ι*. In poetry perhaps the metrical forms such as πλείειν for πλεύειν (sail), √πλυ, raised to πλεu, πλεF, may be traced to a present st. in *ya*, which the Gk. has strangely liked, thus πλείω=\*πλεF-yω, while πλέω=πλέFω; νείος beside νέFος (new), νεϊός beside νεFός

§ 26 b. (fallow), brings us to a f.f. *navyas*, which clearly occurs in Lith. *navu-yas*, Goth. *niuyis*, st. *niuya-* (nēw). From such cases *ei* may have become a more widespread representative of *ε* by analogy. In *πνouiή* for *πνοή*, we find *ya*-stems, whilst *πνοFή* ( $\sqrt{\pi\nu}$ ) has suff. *a*, *πνouiή*=\**πνοFuiή*=\**πνοFyη*, suff. *ya*.

Note 3.—*έός*=*έF-ός*, Lat. *sou-os*, *suus*, f.f. of both \**sev-os*; *τέός*=*τεFός*, Lat. *touos*, *tuus*, f.f. \**tevos* (yet *σός*, fr. *σFος*=\**τFος*, not raised from  $\sqrt{\tau\nu}$ ); through the Latin the Italograec f.-forms are made clear. In forms like *ήδεiα*, fem. of *ήδύς* (sweet), there is a clear step-raising, thus f.f. is *ήδεF-ια*=*svā-dav-yā*, diverging from the unraised Sk. *svāditi*, fr. \**svādryā*.

Note 4.—G. Curt. Gr. Et.<sup>3</sup> p. 500 sqq., treats of *o*, *ω*, as representatives of original *v*. This occurs on the whole but seldom, and mostly in words of uncertain etymology, e.g. *δοάν* (Alkman), for \**δFav*, \**δFηv*, *δήv* (long while), and these must stand for \**διFa-v*, \**διFη-v*, acc. of a st. \**διFa*=Lat. \**diue-*, in *die-s*=\**dive-s* (day, for meaning cf. Lat. *diu*, long).

3. When *y* and *v* stand after *ν*, *ρ*, they regularly occur as *ι* and *υ* before the consonants: in Aiolic dialects, however, assimilation takes place to the preceding consonant: this assimilation occurs in the case of *λ* in the other dialects, transposition in the case of *λ* is merely the exception. The origin of the transposition we must hold to be this, that at first, whilst *y* and *v* were yet in existence, an *i* and *u* arose by assimilation in the foregoing syllable (as in Zend), and that long afterwards the *y*, *v*, disappeared.

*y*; e.g. *κτείνω* (kill), Aiolic *κτένω*, for \**κτεινω*, fr. \**κτενω*; *μέλαινα* (fem. fr. stem *μέλαν-* black), fr. \**μελανγα*; *χειρών* (worse), Aiol. *χέρρων*, for \**χειρ-γων*, fr. \**χεριγων*; *φθείρω* (destroy), Aiol. *φθέρρω*, for \**φθερω*; *κλίνω* (lay), Aiol. *κλίννω*, for \**κλινω*; *κρίνω* (sift), Aiol. *κρίννω*, for \**κρινω*; *πλύνω* (wash), for \**πλυνω*, \**πλυνω*, \**πλυνω*, contrn. of *ι* and *υ* to - and *υ*.

In the case of *λy* the assimln. occurs outside the Aiolic dial., *οφέιλω*, however, for \**οφέλω*, Hom. *οφέλλω* (ought).

Note 1.—After *ν*, *ρ*, *λ*, original *y* very often=*ι*, e.g. *χρόν-ις*,

ἐλευθέριο-s, μακάριο-s, παράλιο-s, collectively constructed with § 26b. original suff. *γα*.

*Note 2.*—For epenthesis of *γ* beside other consonants, we have good instances in *μείζων* (greater) for \**μειγ-γων*, fr. \**μεγ-γων*, *μεγ-* with compar. suff. original *-γανς*; ζ=γγ, consequently this is a clear case of genuine epenthesis; *κρείσσων* (stronger, better) for \**κρειτ-γων*, fr. \**κρετ-γων* (*κρέσσω* preserved in diall.); σσ=τγ (v. post.) formed just like *μείζων*; *πέικω* (beside *πέκω*, comb) for \**πεκγω*, which by the laws of sound (*κγ*=σσ) must coincide with *πέσσω* (cook) in form; st. *γυναικ-* (*γυναικός*, gen. fr. *γυνή*, woman) for \**γυνακι*, cf. *φυλακίς* (female-guard); st. *αἶγ-* (n. sing. *αἶξ* for *αἶγ-s*, goat) for \**ἀγμ-*, cf. Sk. *ajás* (stag), *ajā* (goat) (Curt. Gr. Et.<sup>3</sup> p. 608). It cannot be denied that *πέικω* for \**πεκ-γω* is very doubtful phonetically.

*v*; e.g. *γουνός*, *γούνα* (Aiol. *γόννος*, *γόννα*), *γούνατος*, for *γυνFός*, *γόνFa*, *γόνFατος*, st. *γόνυ* (knee); *οἶλος*, Ion.=*ὄλος* (all), fr. *ὄλFος*, cf. Sk. *sārva-s* (every, all), Lat. *saluo-s*, *sollus* (Fest. totus), fr. \**soluo-s*; *παῦρο-s* (small, few) fr. \**παρFο-s*, cf. Lat. *paruo-s*; *νεῦρο-v* (sinew) fr. \**νερFο-v*, cf. Lat. *neruo-s*.

In consequence of the evanescence of *γ*, *v*, *s*, vowel-§ 27. accumulation and contraction occur frequently.

Thus *s* disappears, e.g. in *φέρη* fr. \**φέρεσαι* (2 sing. pres. med. fr. *φέρω*, bear), Sk. *bhārasē*; *μένους* (gen. sing. fr. *μένος*, might) fr. \**μενεσος*, Sk. *mānas-as*; *εἶην* (1 sing. pres. opt. of *ἔσ-*, *esse*) fr. \**ἔσ-γην*, f.f. *as-yā-m*; *εἰπόμην* fr. \**ἔ-σεπ-ομην*, √*έπ* (follow), i.e. *σεπ*, Sk. *saḥ*, Lat. *seq.* in *ἔπομαι*; *εἶρπον* fr. \**ἔ-σερπ-ον*, √*σερπ* (crawl), Sk. *sarp*, Lat. *serp-o*; *πεποιβῦα* (fem. part. pf. act.) fr. *-υσια*, and the latter fr. *v(an)tyā*, etc.

*F* disappears in *εἰργασάμην* (*Φεργάζομαι*, work) fr. \**ἔ-Φεργ-ασαμην*; *εἶπον*, *εἰπείν*, older *ἔ-ειπον*, fr. \**ἔ-Fe-Feπ-ον*=f.f. *a-va-vak-am*, redupl. aor. of √*Feπ* (speak), Sk. *vaḥ*, Lat. *uoc*, f.f. *vak*, etc.

Loss of *γ* is common above all in the stems whence arise the contr. vbs. in *έω*, *άω*, *όω*, fr. \**εγω*, \**αγω*, \**ογω*=Sk. and origl. *-ayāmi*, e.g. *φορῶ*, *φορέω* (bear)=Sk. *bhārāyāmi*, etc.

*Note.*—The sound-laws by which concurring vowels are regulated in different dialects do not belong in this place;

§ 27. because they extend to explain the Greek forms alone. The fundamental-forms, however, in the commonest and most important cases, conform to the rules laid down in the construction of stems and words.

The forms peculiar to the Greek, e.g. ὀρώω, ὀράας, by assimilation for ὀράω, ὀράεις; δρώωσι beside δράουσι, δρώσι, etc., frequently offer difficulties in their explanation.

§ 28. After the evanescence and medial and final loss of consonants, there often occurs a compensatory lengthening.

1. *n* lost before *s*, followed by lengthening of preceding

*o* to *ου*—e.g. φέρουσι (they bear)=\*φερονσι fr. φέροντι= *bháranti*, φέρουσα=\*φερονσα fr. \*φεροντγα, etc.; λύκους (acc. pl. st. λυκο-, wolf)=\*λυκο-νς, cf. Goth. *vulfa-n*s; Krêtan τό-νς=τούς (acc. pl. st. το- demonstr.), f.f. *ta-n*s, *ta-m*s.

*ε* to *ει*—e.g. τιθείς (n. sing. m. part. pres. act. fr. τίθη-μι, place, √θεε)=Krêtan τιθένς fr. \*τιθεντ-ς; χαρίεις (n. sing. masc. conn. c. χάρις, grace)=\*χαρι-Feντ-ς (but fem. χαρίεσσα=\*χαρι-Feτγα, without *ν*, cf. Sk. sf. -vant, fem. -vatī=vatyā, likewise with loss of *n*), etc.

*a* to *ā*—e.g. ἰστάς (n. sing. m. part. pres. act. ἴστη-μι, place, √στα)=\*ἰστανς fr. \*ἰσταντ-ς, etc.

*u* to *ū*—e.g. δεικνύς (δείκνυ-μι, show)=\*δεικνυνς fr. \*δεικνυν-τς, etc. Similarly εἰμί (am) for \*ἐσ-μι, by compensatory lengthening (cf. Aioli. ἐμμί by assimiln.), Sk. and f.f. *ās-mi*; ὄρεινός (mountainous) for \*ὄρεσ-νος, Aioli. ὄρεν-νός (fr. ὄρος, mountain, Iōn. οὔρος, therefore older \*ὄρ-Φος, √ὄρ, or-iri, exsurgere), st. ὄρες-, with sf. -νο-, etc.

2. Moreover medial compensation is found in the formn. of 1 aor. after the loss of *σ*, preceded by *λ*, *μ*, *ν*, e.g. ἐνεῖμα (νέμω, distribute) for \*ἐνεμ-σα, cf. Aioli. ἐ-νέμμ-ατο, by assimiln.; ἔφηνα (φαίνω for \*φανγω, point out) for \*ἐφαν-σα, ἔστεῖλα (στέλλω for \*στελγω, send) for \*ἐστελ-σα, Aioli. representation of compensation, ἔστελλα, etc.

3. Compensation by lengthening is frequently found in nom. sing. masc. of consonantal stems to compensate for lost

final *s* or *τς*, e.g. ποιμήν (shepherd) for \*ποιμεν-*s*, cf. Sk. *rāḡā* § 28. for \**rāḡan-s*, Lat. *homo* for \**homon-s*, Goth. *guma* (man), i.e. \**gumā* for \**guman-s*; μήτηρ (mater) for \*μητερ-*s*, cf. Sk. *mātā* for \**mātar-s*; πατήρ (father) for \*πατερ-*s*, cf. Sk. *pitā* for \**pitar-s*, Old Lat. *patēr* for \**pater-s*, Goth. *fadar*, i.e. \**fadār*, for \**fadar-s*; εὐμενής (well-meaning) for \*-μενεσ-*s*, cf. Sk. *sumanās* for \*-*manas-s*; φέρων (bearing) for \*φεροντ-*s*; πεποιθώς (perf. pt. act. πέποιθα, trust) for \*πεποιθ-*For-τς*.

### Vowel insertion and addition.

§ 29.

1. Vowel insertion occurs in Gk. in the same way as in Oscan and O.H.G., only less regularly. Acc. to G. Curtius, Gr. Et.<sup>2</sup> 656, sqq., this change takes place only in the neighbourhood of *r*, *l*, and nasals, so that it clearly arises from the vowel-sounds contained in these consonants. *a* and *ε* occur most frequently, *o* and *ι* are rarer, *υ* rarest, as vowels attached to these consonantal sounds: e.g. ὀ-ρέγ-ω (reach, stretch), √ὀρεγ fr. ὀργ, cf. Sk. *arḡ* (reach), beside ὀρυγ-νάομαι (stretch) and ὀρό-γ-υια beside ὀργ-υιά (fathom), where clearly ὀρεγ, ὀρυγ, ὀρογ=ὀργ, origl. *arg*; ταραύ-ω (make uneven, disturb), beside τέ-τρηχ-α (perf.) and τραχ-ύς (rough, uneven), √τραχ, therefore; ἀλεγ-εινός (painful) beside ἄλγ-ος (pain); δολιχ-ός (long)=Sk. *dirgh-ās*, √*dargh*, beside ἐν-δελεχ-ής (unbroken, uninterrupted), fr. same root; ἡλυθ-ον beside ἡλθ-ον (v. sup. § 24); χάλαζα (hail), i.e. \*χαλαδγα, cf. Skl. *grad-ŭ*, Lat. *grand-o*, Sk. *hrād-unī* (storm); κολεκ-άνος, κολοκ-άνος (lank), κολοσσός (colossus) for \*κολοκ-γος, cf. Sk. *krḡ-á-s* (lank), √*karḡ* (make lean), Lat. *crac-entes* (graciles), origl. √*krak*, *kark*; κονίς, pl. κονίδ-ες (dust, nits), cf. O.H.G. *hniȝ*, Bohem. *hnid-a*. Even long vowels clearly arise in this way, e.g. ἐρωδ-ιός (heron), Lat. *ard-ea*.

*Note.*—But *ε* is no auxiliary vowel in such forms as ἡδεῖα, i.e. \*ἡδεF-ια (v. sup. § 26 b. 2, n. 2): and also in ἐπέεσσι fr. \*ἐπεσε-σσι, \*ἐπεσε-σφι, κύνε-σσι, loc. pl. st. ἐπες- (ἔπος, word), κυν- (κύων, dog, g. κυν-ός), and other loc. pls. in consonantal stems. These are probably constructed on the analogies of the *ι*- and *υ*- stems, cf. πόλε-σι, st. πόλι- (state), γλυκέ-σι, st. γλυκύ- (sweet), as

§ 29. doubtless in other languages consonantal stems have often become allied to vowel stems, especially to the *i*-stem (e.g. Lat. *pedi-bus*, st. *ped*-). [Curt. has suggested doubts which I do not understand, especially on account of the Hêrakl. *πρασόντ-ασσι*; he maintains a helping-vowel in these cases.] Less still do futs. of verb-stems in λ, μ, ν, ρ, belong here, e.g. *τενῶ* fr. \**τενεσω*, \**τενεω*; *βαλῶ* fr. \**βαλεσω*, \**βαλεω*. In these cases we come upon the verb-stem -*εσω*, original *asyāmi*, fut. of *√as* (esse) (v. sub. 'Conjugation').

## 2. Vowel addition (prefix).

This phenomenon of sound also is to be referred to the slight development of the vocal-sound before the following consonants. Acc. to G. Curtius (Gr. Et.<sup>2</sup> p. 649, etc.) prefixed-vowels are very rare before simple momentary sounds; they never occur before τ, π, φ, but on the contrary, most frequently before more than one consonant, before liquids, and before nasals. Exx. a) before two consonants, *ἀ-στήρ* (star), cf. Latin *stella* for \**sterula*, Goth. *stairnō*, Sk. st. *star*-; *ὀ-φρύς* (brow), Sk. *bhrū-s*, O.H.G. *brāwa*, Skl. *brūrī*; Lesb. Aiol. *ἄ-σφε*, *ἄ-σφι=σφέ*, *σφί*, origl. st. *sva*; *ἐ-χθές* beside *χθές* (yesterday), Sk. *hyas*, etc.

b) before λ, μ, ν, ρ; *ἐ-λαχύς* (small), Sk. *laghūs*, Lat. *leui-s*, fr. \**legu-is*; *ἐ-μέ*, *ἐ-μοί*, beside *μέ*, *μοί*, origl. st. *ma* (pron. 1 pers.); *ὀ-μιχέω* (mingo), *ὀ-μίχ-λη* (mist), origl. *√migh*, cf. Sk. *mih* (mingere), Lat. *mig*, *mi-n-go*, etc.; *ἀ-νήρ* (man), Sk. st. *nar*-, Umbr. *ner* (prince); *√ἐ-νεκ*- (bear), in *ἡνέχ-θην*, *ἡνεγκ-ον*; *δι-ηνεκ-ής* (thorough), for *νεκ*, cf. O. Bulg. *nes-ti*, Lith. *nėsz-ti* (bear); *ἐν-νέFa* (nine), with redupl. ν, cf. Lat. *nouem*, Sk. *nāvan*, etc.; *ὄ-νυξ* (nail), st. *όνυχ*-, Sk. *nakha-s*, *nakha-m*, O.H.G. *nagel*; *ὄ-νομα*, name, cf. Lat. (*g*)*nōmen*, Sk. *nāman*-, Goth. *naman*-, where in the Gk. the *o* did not arise until the origl. initial *g* had disappeared, *ἐ-ρυθρός* (red)=Sk. *rudhirás*, Lat. *ruber*, fund.-fm. *rudh-ra-s*, *√rudh*; *ἐ-πεβος* (n. lower-world, gloom), Sk. *raḡas* (gloom), Goth. *rikvis* (dimness); *ἐ-πεύγ-εσθαι* (belch), cf. Lat. *ructare* for *rug-tare*, etc.

c) before origl. *v*; *ἐ-Φέργ-ειν* beside *Φέργ-ειν* (keep in), cf. Sk. *varḡ* (keep off); *ἐ-Φέρση* (Il. xxiii. 598), Krêt. *ἄ-Φερσα* beside



*Fépsn*, *ĕpsn* (ros, dew), cf. Sk.  $\sqrt{\text{varś}}$  (rain);  $\epsilon$ -*Feíkocw* (Il. vi. § 29. 217) beside *ĕkocw* (twenty), Boiôt. *Fíkati*, Sk. *vīçāti*, Lat. *uiginti*; the initial was origly. *dv* (*dvi*=two), the  $\epsilon$  was not prefixed until the *d* had disappeared (cf. *ð-noma*); and more frequently in the case of *F*.

d) before other consonants;  $\delta$ -*δούς* (tooth), st.  $\delta$ -*δοντ-*, cf. Lat. st. *dent-*, Sk. st. *dant-* and *danta-*, Goth. *tunthu*; in this word the *o* arises clearly, I think, from the vowel-sound of  $\delta$ , and my view is confirmed by the consonance of the *o* with the *o* of the second syllable, as well as by the agreement of all the other languages in initial *d*. [ $\epsilon\delta$ -*οντες* in Aiolic should, I think, be separated fr.  $\delta\delta\acute{o}\nu\tau\epsilon\varsigma$ , and be regarded as a poetical expression; it is a part. of  $\epsilon\delta\omega$  (eat), 'the eating ones,' i.e. 'teeth'; the origl. *dant-* (tooth) may arise from  $\sqrt{\text{ad}}$ , *da* (eat), but in my opinion *da-nt-* more probably belongs to  $\sqrt{\text{da}}$ , *ad*, 'separate, cut'; cf. Zend st. *dā-ta-*, 'tooth.']  $\acute{\alpha}$ -*δαγμός* (itch),  $\delta$ -*δάξω*,  $\acute{\alpha}$ -*δαξέω* (bite, itch), fr.  $\sqrt{\text{dak}}$  in *δάκνω* (bite), Sk. *daç*. For other inst. of prefixed-vowel before other mom. consonn., more or less probable, see Curt. Gr. Et.<sup>2</sup> p. 653.

## LATIN.

§ 30.

TABLE OF SOUNDS IN THE LATIN LANGUAGE.

CONSONANTS.					VOWELS.
MOMENTARY SOUNDS.				PROLONGED SOUNDS.	
	UNASPIRATED.	ASPIRATED.	NASAL.	r- & l-sound.	
	mute	mute	sonant	sonant	
Gutt.	<i>c, q, g</i>	<i>h</i>	<i>n</i>		$\left. \begin{array}{l} a, \bar{a} \\ e, \bar{e}, ae \\ i, \bar{i} \\ o, \bar{o} \\ u, \bar{u} \end{array} \right\} oe$
Pal.		<i>j</i>			
Ling.				<i>r, l</i>	
Dent.	<i>t, d</i>	<i>s</i>	<i>n</i>		
Lab.	<i>p, b</i>	<i>f, v</i>	<i>m</i>		

§ 30. *Note 1.*—I have placed *h* amongst the mute spirants, because it is nowhere pronounced with a vowel-sound except in *Sk*.

*Note 2.*—Guttural *n* has no peculiar character; *n* is gutt. before gutt. consonn. *c*, *q*, *g* (*n adulterinum*), but not after *g*, where, contrary to the German usage, it must be pron. like ordinary dental *n*.

Diphthongs, almost exclusively peculiar to Old. Lat., are *ai* (*ae*), *au*, *ei*, *eu*, *oi* (*oe*), *ou*, *ui*.

### § 31. LATIN VOWEL-SYSTEM.

The Lat. vowel-system has suffered frequent changes in the course of time. Classical Lat., like Umbrian, shows a distaste for diphthongs, and these have changed to more compact sounds: the old diphthongs are vouched for by Old Lat., and esp. by Oscan. In the above cases the Lat. is insensible to vowel-development. A movement of root-vowels in their scales (confined, however, generally to two steps only) is not still shown except in a few roots.

The influence of final sounds, and further of sounds generally on one another (of consonant upon vowel, vowel upon vowel), has reached a high pitch in Lat. Unoriginal shortenings and lengthenings also occur frequently, so that the vowel-system of the Latin has diverged very widely from the original sounds. Besides, Old-Lat. and Osc. (both Italic languages with more origl. vowel-systems) have reached us only in a very fragmentary condition, while Classical Lat. has the characteristics of a written language which became stereotyped under foreign influence, and Umbr. is in the highest degree unoriginal in its vowels. Accordingly, of all Indo-Germ. languages, Lat. offers the greatest difficulties to a scientific investigator.

*a* is frequently weakened to *u* and *i*, and passes in a great measure into *e* and *o* (later generally to *u*), as in Gk.; similarly *ā* into *ē* and *ō*, only in Lat. the influence of neighbouring sounds is clearly the reason for vowel-colouring. In consequence of the full and thorough conformity of the Lat. with

the Greek vowel-scales, we are probably entitled to treat *ō* in § 31. Latin also as a vowel of the second step.

The *i*- and *u*- scales were in the oldest form of the language exactly like the Greek, especially in the distinction of *ai* and *au* from *ei* and *eu*. In the *u*-scale the second step takes throughout the place of the first, whilst *e* before *u* (*vu*) passes into *o*, according to Lat. sound-laws (vid. § 34) [as in Gk. the converse takes place]. The later language, however, has preserved only *au* of the old diphthongs; yet even this diphthong shows a marked tendency to become a simple sound in certain cases.

Latin vowel-scales (Old Lat. sounds distinguished by upright characters):

	Weakening.	Fund.-vowel.	1st Step.	2nd Step.
1. <i>a</i> -scale loss.	<i>i, u</i>	<i>e, o, a</i>	<i>o, ē, ā</i>	<i>ō</i>
2. <i>i</i> -scale		<i>i</i>	<i>ei ī ē, ai ae</i>	<i>oi oe ū</i>
3. <i>u</i> -scale		<i>u</i>	<i>eu</i>	<i>au ō ou ū</i>

In Class. Lat. *eu* no longer exists as a vowel-step, but has become *ou* (i.e. *ū*).

The change from diphth. to monophth. is capable of simple physiological explanation (assimilation of both sounds, each to the other, e.g. *ei* to *ē*, *ai* to *ae*, *oi* to *oe*, *au* to *ō*, or of one to the other, as *ei* to *ī*, *ou* to *ū*), the change from *oi*, *oe* to *ū*, is caused by the common passing of *o* into *u* (change-scale *oi*, *ui*, *ū*; possibly also *oe*, *ue*, *ū*).

#### EXAMPLES.

§ 32.

##### 1. *a*-scale.

Weakening. 1. Loss of radical *a*, e.g. *sūm*, *sumus*, *sunt*, *siēm*, etc., for \**es-um* fund.-fm. *as-mi*, \**es-umus* f.f. *as-masi*, \**es-unt* f.f. *as-anti*, \**es-iēm* f.f. *as-yām* (✓*es*, to be, cf. Gk.); *gigno* (produce, cf. γίγνομαι), fr. \**gi-gen-o*, ✓*gen* (cf. *gen-ui*, *gen-us*), origl. *gan*; especially in the second member of compounds is this loss frequent, as in *malo* fr. \**maulo*, and this again fr. \**mage-uol-o*

§ 32. (*magis uolo*), and in like cases (v. 'Sound-laws,' § 42): sf. *-br-um* (in part at least fr. *\*ber-um*),  $\sqrt{ber}$ , origl. *bhar* (*ferre*), so that here we have a compound, not a stem-formative sf.; the same remark applies to *-gnus* fr. *\*-genus* ( $\sqrt{gen}$ , *gi-gn-ere*), e.g. *mali-gn-us* (*ill-disposed, malus, evil*), and others, and *-gium* in *iur-gium* (*lawsuit*) for *\*iur-igium*, cf. *rem-ig-ium* (*rowing*),  $\sqrt{ag}$  (*agere*), etc.

In stem-formative suffixes, loss of origl. *a* occurs, as in the kindred languages, e.g. *patr-is*, older *\*patr-us*, *\*patr-os*, for *pater-os*, st. *pater*, f.f. *patar-as* (gen. sing.), and in many other cases.

2. Weakening of *a* to *i* is very frequent, esp. in the second member of a compound, e.g. *ac-cipio* (*receive*) beside *capio* (*take*); *per-ficio* (*complete*) beside *facio* (*make*); *as-sid-eo* (*sit by*),  $\sqrt{sad}$ , Lat. *sed*; *me-min-i* (*bring to mind*),  $\sqrt{man}$ ; *co-gni-tus* (*known*),  $\sqrt{gna}$ , fr. *gan*; *in-si-tus* (*implanted*),  $\sqrt{sa}$ , etc.; moreover in stem- and word-formative particles, e.g. *ueh-is*, *ueh-it* (2, 3, sing. pres.,  $\sqrt{ueh}$ , *carry*), for *\*ueh-isi*, *\*ueh-iti*, origl. *vagh-asi*, *vagh-ati*; *nō-min-is* (gen. sing. *nōmen*, *name*), origl. *gnā-man-as*, etc.

It occurs even in the accentuated syllable of the word (as in Germ.), e.g. *in-ter* (*between*), Umbr. *an-ter*, compar. of pronoml. st. *an*, cf. Sk. *an-tār*, *án-tara-s* (*inter, interior*), Gk. *ἐν-τρεα*; *in-* (neg.), Umbr. *an-*, Sk. *an-*, Gk. *ἀν-*; *igni-s* (*fire*), Sk. *agni-s*; *quin-que* (*five*), f.f. *kankan*, Sk. *pánkan*.

In the reduplication-syll. of pres. stems fr. roots in root-vowel *a*, this weakening takes place regularly, e.g. *gi-gno* (*beget*) fr. *\*gi-gen-o*, f.f. *ga-gan-āmi*, cf. Gk. *γί-γν-ομαι*,  $\sqrt{gan}$ ; *ser-o* (*sow*) = *\*siso* (*i* changed to *e* on acct. of the *r*), f.f. *sa-sā-mi*,  $\sqrt{sa}$ ; *si-st-o* (*set*), f.f. *sta-stā-mi*,  $\sqrt{sta}$ ; *sido* (*set myself*) fr. *\*si-sdo*, *\*si-sed-o*, f.f. *sa-sad-āmi*,  $\sqrt{sad}$ .

*Note.*—The lengthening of *e* weakened from origl. *a* into  $\bar{e}$  (*ei*) is hardly susceptible of proof: *scribo* (*write*) beside *γράφω*, since both words are generally akin, we must perhaps assume to be a case of *a*-scale passing into *i*-scale, as often in Slavonic.

Teutonic: in cases such as *uir̄-tim* (man by man) fr. st. *uiro*-§ 32. (*uir*, man), the analogy of other forms (verbal stems) is followed (cf. *tribu-tim*, etc.).

3. Weakening of *a* to *u* is common, esp. in stem- and word-formative elements, but also in roots, through the influence of certain consonants. *i* is clearly the furthest weakening from *a*, for *u* through intermediate *ü* ("medius quidam inter *i* et *u* sonus—pinguius quam *i*, exilius quam *u*—sonum *y* Graecae uidetur habere" Gramm.; imp. Claudius Caesar ordered the character  $\vdash$  to be used for this sound) often changes to *i*, whilst older forms in *u* exist beside later ones in *i*; *u* is also an unimportant representative of weakening from *a* through *o*, the older lang. very often retaining *o* where later *u* occurs. The vowel-scale of change from *a* to *i* is therefore evidently: *a*, *o*, *u*, *ü*, *i*. Thus, e.g. a f.f. *ap-tama-s* becomes \**op-tomo-s*, *op-tumu-s*, *op-tümu-s*, *op-timu-s* (best), Ital. *ottimo*; *dakama-s*, \**decomo-s*, *decumu-s*, *decimu-s* (tenth), Ital. *decimo*; beside *cap-io* (take), *man-cup-ium* (property; Plaut.), *oc-cup-are* (seize), *in-cip-ere* (begin), *man-cip-ium*; *con-cut-io* (shake violently) beside *quat-io* (shake), *in-sul-sus* (unsalted) beside *salsus* (salted), etc. *u* is frequent as a merely later change fr. older *o* (cf. Gk., where *o* remains), especially in word-formative elements, e.g. nom. acc. sing. masc. neut. of origl. *a*-stem *-u-s* fr. Old-Lat. *-o-s*, Gk. *o-s*, origl. *-a-s*; *-u-m*, Old-Lat. *-o-m*, Gk. *-o-v*, origl. *-a-m*, e.g. *da-tu-s* (given) fr. *da-to-s*, Gk. *δο-τό-s*, origl. *da-ta-s*; acc. *da-tu-m* fr. *da-to-m*, Gk. *δο-τό-v*, origl. *da-ta-m*. Lat. *os*, *us*, generally represents origl. final *as*, e.g. *gen-us* (race), earlier *gen-os*=*γέν-ος*, Sk. *gán-as*, origl. *gan-as*; *op-us* (work), Old-Lat. *op-os*, Sk. and origl. *áp-as*; *-bus* (sf. dat. abl. pl.), earlier *-bos* for *-byos*, Sk. *bhyas*; *ferunt* (they bear), Old-Lat. *fer-ont*, *fer-onti*, Gk. *φέρ-οντι* (*φέρ-ουσι*), Sk. and origl. *bhár-anti*; also in pres. part. *o* clearly is the form of the earlier lang., cf. *e-unt-em* (him who goes), i.e. *e-ont-em*, where beside *e*, *o* has become *u*, whilst *e* regularly occurs; *uol-unt-arius* (willing)

- § 32. points to a once-existing \**uolont-*, \**uolunt-*, beside usual *uolent-* (willing), etc.

After consonantal *u*, *o* remains, e.g. *uolt* (later *uult*, he will), Sk. and origl.  $\sqrt{var}$ ; *loquontur* (*loquuntur*, they speak); *quom* (*quum*, conj. 'when,' 'since,' cf. *quon-iam*), f.f. *ham*; *quo-d* (which), f.f. *ka-t* (but *is-tu-d*, f.f. *ta-t*); *nouo-s*, new (*nouus*), Sk. and f.f. *náva-s*, etc.

*Note*.—Through the older *o*-forms, Latin approaches near to Greek.

- § 33. The root-vowel of the *a*-scale, origl. *a* is represented by—

1. *a* preserved in a very few cases, appearing by preference before *g*, *c*, e.g. *ac-us* (needle), *ac-ies* (point), *ac-erbus* (sour),  $\sqrt{ac}$ , Sk. *aç*, origl.  $\sqrt{ak}$ ; *ag-o* (drive),  $\delta\gamma\text{-}\omega$ , Sk. *ág-āmi*,  $\sqrt{ag}$ ; *mag-is* (more), *mag-nus* (great),  $\mu\acute{\epsilon}\gamma\text{-}\alpha\varsigma$ , Sk. st. *mah-ánt-* (n. sing. masc. *mah-án*), Goth. *mik-ils*,  $\sqrt{mag}$ , Sk. *mah* fr. *magh*; *frag-ilis* (breakable), *frag-or* (crash), *fra-n-go* (break), Goth.  $\sqrt{brak}$  (pres. *brik-a*, pf. *brak*); *ang-uis* (snake), Sk. *áh-is*, Gk.  $\epsilon\chi\text{-}\iota\varsigma$ , Germ. *unk*; *ans-er* (goose) for \**hans-er*, Germ. *gans*, Sk. *hàs-ás*, f.f. *ghans-*; *al-ius* (other),  $\alpha\lambda\lambda\omicron\varsigma = *\alpha\lambda\text{-}\gamma\omicron\varsigma$ , Goth. *al-is*; *ap-iscor* (get), *ap-tus*, cf. Sk. *āp-nō-mi* (1 sing. pres. ind. adipiscor)  $\sqrt{ap}$ ; *sta-tus* (placed), Gk.  $\sigma\tau\alpha\text{-}\tau\acute{o}\varsigma$ , f.f. *sta-tas*,  $\sqrt{sta}$ ; *sa-tus* (sown),  $\sqrt{sa}$ ; *da-tus* (given), *da-tor* (giver), Gk.  $\delta\omicron\text{-}\tau\acute{o}\varsigma$ ,  $\delta\omicron\text{-}\tau\acute{\eta}\rho$ ,  $\sqrt{da}$ , etc.

2. Origl. *a* appears as *o*, especially in roots before and after *v*, and further in stem- and word-formative elements.

After *v*, as *uom-o* (spue), Gk.  $\Phi\epsilon\mu\text{-}\acute{\epsilon}\omega$ , Sk. *vám-āmi*; *uol-o* (will), *uol-t*, *uol-im*, later *uult*, *uel-im*, cf. Sk. *vár-āmi* (*vr-ñōmi*, *vr-ñāmi*),  $\sqrt{var}$ ; *uoc-are* (call), Sk.  $\sqrt{vak}$ , Gk.  $\Phi\epsilon\pi$ , origl. *vak*; *uort-o* (turn), later *uert-o*, cf. Sk. *várt-atē* (3 sg. pres. med. uertitur, est),  $\sqrt{vart}$ ; *uo-s* (you), *uoster* (your), later *uester*, cf. Sk. *vas* (uos, uobis); *uolu-ere* (twirl), Goth. *valv-yan* (uoluere); cf. *quatuor* (four) for \**quatuors*, \**quatuores*, beside  $\tau\acute{\epsilon}\varsigma\sigma\alpha\pi\epsilon\varsigma = *\tau\epsilon\tau\text{-}\Phi\alpha\pi\epsilon\varsigma$ , f.f. prob. *kavāras*; even *uocuus* (empty) in inscr. for *uacuus*.

Origl. *sva* is regularly so in Lat., prob. fr. *suo* for *sue*, origl.

*sva*, by the above rules; *u* falls out, as in *te* (thee), *se* (himself), § 33. etc., for \**tue*, \**sue*, e.g. *socer* (father-in-law) fr. \**suocer*, \**suecer*, Gk. *ἐκύρος* for \**σFekypos*, Sk. *sváçuras* (written *çrâçuras*), Goth. *svaihra*, cf. *socrus* (mother-in-law), Sk. *svâçrûs* (written *çrâçrûs*); *sorõrem* (sister, acc.), Sk. *svâsâram*, f.f. *svastâram*; *sop-or*, *somnus* (sleep), for \**sop-nus* (cf. *ὑπ-νος*), Sk. and f.f. *svâp-nas*, *svâp-i-mi* (I sleep); *son-us* (sound), Sk. *svân-as*.

Before *v*, e.g. *ou-is* (sheep), Gk. *ὄFis*, Sk. *áv-is*, Lith. *av-ìs*; *nou-os*, later *nou-us* (new), Gk. *νέF-os*, Sk. *náv-as*; *nou-em* (nine), Gk. *ἐν-νέFa*, Sk. *náv-an*.

In other combinations, e.g. *mor-ior* (die), origl. and Sk.  $\sqrt{\text{mar}}$  (*mori*); *dom-are* (tame), Gk.  $\sqrt{\text{δαμ}}$  (*ἔ-δαμ-αυ*), Sk. *dam*, Goth. *tam*, H.G. *zam*; *op-us* (work), Old-Lat. *op-os*, Sk. *áp-as*; *loq-uor* (speak), cf. Gk. *ἔ-λακ-ον*, Sk.  $\sqrt{\text{lap}}$ ; *po-tis* (powerful), *po-tens* (mighty), *po-tiri* (become master of), cf. Gk. *πό-σις* (lord), Sk. and origl. *pá-tis* (master) [perh. in these instances the lab. *m*, *p*, and the lab. vowel which in Lat. accompanies *l*, are the causes of *o* representing *a*]; *coq-uere* (cook), Gk.  $\sqrt{\text{πεπ}}$ , Sk. *pak*, Lith. *kep*, etc., origl. *kak*.

In terminal particles (stem- and word-formative) *o* is remarkably regular before *s* and *m* (as in Gk.); for later weakening of *o* to *u*, v. sup. §§ 32, 3); e.g. suff. *-to* in n. sing. m. and acc. masc. and neut. *-to-s*, *-to-m*, Gk. *-το-ς*, *-το-ν*, Sk. *-ta-s*, *-ta-m*, e.g. *in-chu-to-s* (famed), acc. *chu-to-m*, cf. Gk. *κλυ-τός-ς*, *κλυ-τό-ν*, Sk. *çru-tá-s*, *çru-tá-m*, origl. *kru-ta-s*, *kru-ta-m*; neut. termn. *-os*, later *us*, e.g. *gen-os* (*gen-us*, race), Gk. *γέν-ος*, Sk. *ján-as*, origl. *gan-as*, so also *Ven-os* (prop. n. fem., *-os* authenticated); Lat. pl. *-bos* (*-bus*), Sk. *-bhyas*, etc.

3. *a* passes into *e* very frequently, without assignable reason, in neighbouring sounds: e.g. *fer-o* (bear),  $\sqrt{\text{fer}}$ , Gk. *φέρ-ω*, Sk. and origl. *bhár-āmi*,  $\sqrt{\text{bhar}}$ ; *es-t* (he is),  $\sqrt{\text{es}}$ , Gk. *ἐσ-τί*, Sk. and f.f. *ás-ti*,  $\sqrt{\text{as}}$ ; *sed-eo* (sit),  $\sqrt{\text{sed}}$ , Sk. and origl. *sad*; *gen-us* (race), Old-Lat. *gen-os*,  $\sqrt{\text{gen}}$ ,  $\sqrt{\text{Gk. γέν-ος}}$ , Sk. *ján-as*, origl. *gan-as*,  $\sqrt{\text{gan}}$ ; *ueh-it* (he carries),  $\sqrt{\text{ueh}}$ , Sk. *váh-ati*, f.f.

§ 33. *vagh-ati*, √*vagh*; *pecu-* (cattle), Sk. .st. *paçû-* (n. sing. masc. *paçû-s*), f.f. stem *paku-*; *eq-uos* (horse), √*ec*, Gk. ἵππος=\**ik-Fos*, Sk. *ág-vas*, √*aç*, f.f. *ak-vas*, √*ak*; *dec-em* (ten), Gk. δέκα, Sk. *dāçan-*, f.f. *dakan-*; *septem*, Gk. ἑπτὰ (seven), Sk. and f.f. *saptán-*; *dent-em* (tooth, acc.), *ὀ-δόντ-a*, Sk. *dánt-am*; *men-te-m* (mind, acc.), f.f. *man-ti-m*, √*man*; *fer-ent-em* (bearing, acc.), *φέρ-οντ-a*, Sk. and f.f. *bhár-ant-am*; the origl. sound-combn. *ant* also becomes *ont*, *unt*, in Lat., e.g. *fer-unt* (they bear) fr. \**fer-onti*, Sk. and origl. *bhár-ant-i*, *e-unt-em* (going, acc.; cf. § 32), beside *fer-ent-em*; st. *pa-ter-* (father), *mā-ter-* (mother), origl. *pa-tar-*, *mā-tar-*; (*g*)*nō-men* (name), Sk. *nā-man-*, f.f. *gnā-man*, etc.

*e* is often an evident weakening from *a*, e.g. *per-fec-tus* (made thoroughly) beside *fac-tus* (made), etc.

*e* has proceeded from *o* in cases such as *uert-o*, *uester*, etc., fr. older *uorto*, *uoster*, f.f. *vart-ā-mi*, Sk. and origl. √*vart*, Goth. *varth*; *uos-ter*, cf. Sk. *vas* (uos, uobis) (cf. § 33). Accordingly *e* comes after *a* and *o* as a lighter vowel.

#### § 34. Step-formation of *a*.

1. Corresponding to *e* we find *o* as the equivalent heavier vowel, and *o* sometimes occurs as a step-formn. fr. *e=a* (cf. Gk. and Slav.); thus in these cases *o=ā*; *e: o=a: ā*, e.g. *mon-eo* (warn), i.e. *mān-āyāmi*, caus. vb. fr. origl. √*man* (think, thus simply=make to think), beside *mens* (mind) for \**ments*, \**men-ti-s*, f.f. *man-ti-s* (sf. *tī*), fr. √*man*, cf. *me-mīn-i* (I remember), later with weakening of *e* to *i*; *noc-eo* (hurt), f.f. *nāk-ayāmi*, caus. vb. fr. origl. √*nak*, Sk. √*naç* (die) (so simply 'make to die'), *nex*, *nec-is* (death), *per-nic-ies* (ruin), *nec-are* (kill), cf. *νέκ-υς*, *νεκ-ρός* (corpse); *tog-a* (wrapper) beside *teg-o* (cover), √*tag* (H.G. *tak*), prob. for *stag*, cf. *στέγ-ω*, Sk. *sthág-āmi* (cover), in Lith. *steg-iù* (cover) stands beside *stōg-as* (tectum); *socius* (comrade) beside *seq-ui* (go with), *ad-sec-la* (escort); *doc-eo* (teach), caus. f.f. *dāk-ayāmi*, beside *di-dic-i*, *disco* (learn) for \**dic-sco*, prob. for \**di-dac-sco*, cf. *δι-δά(κ)-σκω* (teach) beside *διδάξω*, i.e. *διδάκ-σω*, *διδαχ-ή* (teaching), √*dak* (not *dic*, as in



*dic-o*, *δεῖκ-νυμι*, which must be kept distinct); *proc-us* (wooer) § 34. beside *prec-ari* (beg); *for-s* (chance), *for-dus* (pregnant), beside *fero* (bear), *√fer*, origl. *√bhar*.

When *o* is short, the step-formations can take place also before two consonants, e.g. *pond-us* (n. weight) beside *pend-ère* (weigh); *ex-torr-is* (exile), *torr-eo* (roast)=\**tors-co*, cf. *tos-tus* (p. part. pass. torreo) for \**tors-tus*, beside *terra* for \**ters-a* (the 'dry land' in contrast to the 'water'), *√tars*, Goth. *thars* (in *thairsan*, roast, *thairsyan*, thirst, vb.), Sk. *tarś* (thirst). Beside *a*, *o* occurs in *scob-s* (sawdust), *scob-ina* (rasp), and *scüb-o* (scratch); *port-io* (share) beside *part-em* (*pars*, part), *in-pert-io* (give, share).

2. *ē* is not common, e.g. *tēg-ula* (tile) beside *tēg-o* and *tōg-a*; *rēg-em* (*rex*, king), cf. Sk. *rāj-am*, *rāj-ānam* beside *rēg-o* (rule); *lēg-em* (*lex*, law), *col-lēg-a* (comrade in office) beside *lēg-o* (pick out, read), *sēd-es* (seat) beside *sēd-eo* (sit), *√sad*; *sē-men* (seed) beside *sā-tus*, so chiefly as a step-formn. of *e*; *ē* corresponds to origl. *ā* in *plē-nus* (full), f.f. *prā-nas*, *√pra*, *par* (fill); *ēd-i*, cf. Sk. *āda*, i.e. \**aāda* (perf.), fr. *ēd-o* (eat), Sk. *ād-mi*; *sēmi* (half), Gk. *ἥμι*, Sk. *sāmi*, O.H.G. *sāmi*; *siēm*, *siēt* (1, 3, opt. fr. *es*, be), cf. *εἶην*, *εἶη*, Sk. *syām*, *syāt*, origl. *as-yā-m*, *as-yā-t*, in which cases perh. *i* has had an assimilating influence.

3. As *ē* is to *ē*, so is *ā* to *a* in the sound-scale, which, therefore, occurs most often before guttural consonants, e.g. *āc-er*, *āc-ris* (sharp), beside *āc-ies* (point); *plāc-are* (appease) beside *plāc-ère* (please); *pāc-em* (*pax*, peace), thence *pāc-are* (to pacify), beside *pāc-isci* (bargain); *māc-ero* (soften) beside *māc-er* (thin): *amb-āg-es* (roundabout-way), cf. *amb-ig-ere* (be in doubt), fr. *√ag* in *āg-o* (drive, lead), Gk. *ἄγω*, Sk. *āj-āmi*, origl. *ag-āmi*; st. *con-tāg-io-* (*con-tāg-iu-m*, contact), and further formed from it the commoner *con-tāg-iōn-* (n. sing. *con-tāg-io*), fr. *√tag* in *tango* (touch), *tac-tu-s* (past part. pass.) for \**tag-tus*, cf. *con-tingo* (touch, hit); st. *suf-frāg-io* (*suffrāg-ium*, origly. 'sherd'; vote) beside *frāg-or* (crash), *√frag*, cf. *fra-n-go* (break), *in-fri-n-g-o*

§ 34. (break into); *sāg-ire* (perceive), *sāg-us* (sooth-sayer), *sāg-a* (witch) beside *sāg-ax* (knowing); *pāg-ina* (page, leaf), *com-pāg-i* (compages, union), *com-pāg-in-* (compago), fr.  $\sqrt{\text{pag}}$  in *pa-n-g-o* (fix), cf. *com-ping-o* (fix together); *uād-o* (go) beside *uād-o* (uadum, ford); *lāb-i* (glide) beside *lāb-are* (totter); *dā*, *dā-s*, beside *dā-tus*,  $\sqrt{\text{da}}$  (give); *fū-ri* (speak), *fā-ma* (fame), *fā-cundus* (eloquent), beside *fā-teri* (own to), origl.  $\sqrt{\text{bha}}$ ; *mā-ter* (mother), Sk. *mā-tar-*,  $\sqrt{\text{ma}}$ ; *frā-ter* (brother), Sk. *bhrā-tar-*,  $\sqrt{\text{bhra}}$ , transposed fr. *bhar*.

The fem. of the *a*-st. had origly. in the Lat. also long *a*, e.g. *nou-ā*, *coc-tā*, origl. *nar-ā*, *kak-tā*, cf. Sk. *nāv-ā*, *\*pak-tā* (this form does not happen to occur, but is replaced by an entirely different form *pak-rā*), Gk. *véf-ā*, *πεν-τή*, fr. *nou-o-s*, *coc-to-s*, *nou-u-s*, *coctus*, origl. *nar-a-s*, *kuk-ta-s*, Gk. *véf-o-s*, *πεν-τό-s*. Remains of this *ā* have been preserved in Latin.

4. Not unfrequently *ō* is a step-formation from *a*, especially beside *o=a*, and where *a* is a root-termn., further in stem-formative elements, e.g. *per-sōn-a* (mask) beside *sōn-us* (sound), *sōn-are* (sound), Sk. and origl.  $\sqrt{\text{svan}}$ ; *sōp-iō* (put to sleep), i.e. Sk. and origl. *svāp-āyāmi*, causat. verb, beside *sōp-or* (sleep), Lat.  $\sqrt{\text{sop}}$ , Sk. and origl. *svap*; *uōc-em* (*uox*, voice)=Sk. *vāk-am*, Gk. *φόπ-a*, origl. *rāk-am* beside *uōc-o* (call), origl.  $\sqrt{\text{vak}}$  (speak); *ōc-iōr* (swifter), comp. fr. lost adj. corresponding to Gk. *ὤκ-ύ-s*, Sk. *āḥ-ū-s* (swift) (perh. sounded *\*oquis*), origl.  $\sqrt{\text{ak}}$ ; *dō-num* (gift), Sk. and f.f. *dā-na-m*, *dō-te-m*, n. *dōs* (dowry, = *dō-ti-s*), f.f. *dā-ti-m* beside *dā-tus*,  $\sqrt{\text{da}}$ ; *gnō-sco* (*nō-sco*, learn), *gnō-tus* (known, cf. *γν-γνώ-σκω*, *γνώ-τός*), *gnō-men* (name) beside (*g*)*nōta* (mark), *co-gnī-tus* (known),  $\sqrt{\text{gna}}$ , fr. *gan* (as later forms show); *pōd-ea* beside *pēd-o* and *pēd-ico*, Sk. and origl.  $\sqrt{\text{pard}}$ , Gk. *περδ*, H.G. *farz*; *dā-tōr-em* (giver, acc.), Sk. *dā-tār-am*, Gk. *δο-τήρ-a*, origl. suff. *tar*, here raised to *tār*; *quō-rum* fr. st. *quo-* (rel. interrog.), origl. *ka*, etc.

5. *ū* as=origl. *ā* can only be considered a later parallel form from *ō*, since *o* has frequently become *u*; probably it does not

occur within the root. Hence the suff. *-tūro-*, fem. *-tūra-*, e.g. § 34. *da-tūr-us* (about to give), *rup-tūr-a* (breach), Lat. formns. from stems in *-tōr*, origl. *-tar*, *da-tōr-*, *rup-tōr-*, origl. *da-tār-*, *rup-tār-*; the suff. of gen. pl. *-um*, *-rum* (prob. for *-ūm*, *-rūm*, cf. Bücheler, Grundriss der Lat. Decl., p. 40) stands for earlier *-ōm*, *-rōm* (*bou-om* even in Verg.), Gk. *-ōv*, in *\*-ōv*, Sk. and origl. *-ām*, *-sām*, e.g. (*is*)*tarum*=Gk. *\*ταών*, i.e. *τῶν*, Sk. *tāsām*; *vōc-um*=Gk. *Φοπ-ῶν*, Sk. *vāk-ām*.

## 2. *i*-scale.

§ 35.

In this, as in the *u*-scale, there is a lack of roots which present all three steps at once. In the *i*-scale, I know only the  $\sqrt{fid}$  in *fides* (faith), *per-fid-us* (faithless) beside *con-fid-o* (trust), i.e. *feid-o* (*di-feid-ens* is vouched for) and *foid-os* (*foedus*, treaty): even in roots which appear in two steps, e.g.  $\sqrt{dic}$  (Gk. *δικ*, Sk. *diç*, etc.), in *in-dic-o* (point at), *causi-dic-us* (advocate) beside *deic-o*, *dic-o* (say); and  $\sqrt{i}$  (go) in *i-tum* beside *ei-s*, *ei-t*, *ei-tur*=*is*, *it*, *itur* (cf. *εἶμι*, go, Sk. *ē-mi*), there is a step wanting.

The fundamental vowel *i* occurs, e.g. in *dic-are* (dedicate),  $\sqrt{dic}$ , cf. Sk. *diç*, Gk. *δικ* (in *δεῖκ-ννμι*); *i-tum* (cf. *ἵ-μεν*, Sk. *i-más*),  $\sqrt{i}$  (go); *uid-eo* (see), cf. Sk. *vid-más*, Gk. *ἴδ-μεν*, Goth. *rit-um*,  $\sqrt{vid}$ ; *sci-n-d-o* (slit), *scissus*=*\*scid-tus* (slitten), cf. Sansk. *khi-n-á-d-mi*, *σχίζω*=*\*σχιδ-γω*, Goth.  $\sqrt{skid}$  in *skaid-an*,  $\sqrt{scid}$ ;  $\sqrt{mig}$ , origl. *migh*, Gk. *μυχ*, in *mi-n-g-o*, *mic-tus* for *\*mig-tus* (past part. pass.);  $\sqrt{lig}$  in *li-n-g-o* (lick), origl. *righ*, Gk. *λιχ*; *qui-s* (who?), cf. Goth. *his* (dem.), Lith. *szi-s*, f.f. *ki-s*,  $\sqrt{qui}$ =*hi*. In stem-formative elements, e.g. *ou-i-s* (sheep), Gk. *ὄF-ι-s*, Sk. *áv-i-s*, Lith. *av-ì-s*,  $\sqrt{u}$ , *av*, with suff. *i*, *i* is often lost in consequence of its position at the end of a word, e.g. *men-s* for *men-tis*, *men-ts*, f.f. *man-tis*, or dulled to *e*, as *men-tem*, cf. sqq.

This genuine *i* is dulled to *e* according to definite laws, e.g. *in-dex*, *in-dic-is* (pointer),  $\sqrt{dic}$ ; *ig-ne-m* (fire, acc.) for older *ig-ni-m*, Sk. *agni-m*, Lith. *ùgni*. The earlier forms of this acc. occur not uncommonly, as *navi-m* (ship, acc.) beside *naue-m* and

§ 35. others. Also *mare* for \**mari*, cf. *mar-i-a* (in similar cases final *i* is lost); so also in *nauc-bos*, *tempestate-bus* (inserr.), origl. *i* has passed into *e*, stems *nāui-*, *tempestāti-*.

*Note*.—Thus here *e* is the newer, *i* the origl. and hence older sound; whilst in the case of the more usual *i* weakened from *a*, when it is interchanged in the earlier lang. with *e*, the latter is the earlier sound. The language, however, no longer felt the difference of derivation, and both *i*-sounds were treated alike. Perh. unorigl. lengthening of *i* to *ī* should not be separated from step-formn. of *i* (to *ei*).

First step: *ei* (*ī*, *ē*); \**deiu-os*, *dīu-os* (godlike, *deiuae*, *deiuinus*, occur), Sk. *dēvā-s*, f.f. *daiva-s*, √*div* (shine); *deic-o*, *dīco* (say), f.f. *daik-āmi*, √*dic*; *ei-tur*, *ī-tur* ('it is gone,' impers.), √*i*; *feid-o*, *fīd-o* (trust), √*fid*; *ueiuo-s*, *uīuo-s* (alive), cf. Sk. *gīvā-s*, Lith. *gīcas*, √*gi*, redupl. *gig*, *uig*, *giu*, *uiu* (*u* for *g*, through intermed. *gu* (vid. sub. "Consonn."), *ueic-us*, *uīc-us* (hamlet), Sk. *εῖcas*, Sk. *Fōikos*; *uīnum* (wine), i.e. *ueinom*, Goth. *vein*, Gk. *Fōinos*; clearly *īd-us*, *eid-us* (a fixed day in the month, origly. the day on which the moon shines, the bright day; Corss. Krit. Beitr. 261), √*id*, origl. and Sk. √*idh* (vid. sub. *ai*, *ae*).

*Deus* (god) is weakened fr. \**dēus*, \**dēuos*, \**deiuos*, and is thus a parallel-fm. to *dīuos*, to which *deiuūnus* points; so *ēo* (go) is clearly for \**ēo*, \**ēyo*, f.f. \**aiy-āmi* for \**aiāmi*, with splitting up of *i* into *iy*; *uen-dēmia* (inserr.)=*uin-dēmia* (vintage).

In word-formative elements, *ē* beside *ei*, *ī*, is common, later generally the rule, e.g. *omneis*, *omnis*, *omnes*, etc.

*ai*, *ae*, occur here and there as in Gk., e.g. *aid-e(m)*, *aed-es* (house, hearth), *aid-ilis* (overseer of buildings), *aes-tās* (summer heat) for \**aed-tas*, cf. Gk. *αἶθ-ω*, *αἶθ-ουσα*, *αἶθ-ήρ*, Sk. √*idh* (kindle); *ae-uo-m*, old *ai-uo-m* (aye, long time) (except in gend.)=Sk. *ēv-a-s* (course), cf. *ai-Fών*, √*i* (go), origl. suff. *va*; *maes-tus* (sorrowful), *maer-eo* (grieve, intr.) beside *mis-er* (wretched); *aem-ulus* (vying) beside *im-itari* (imitate); *laeuos* (left-), cf. *λαίFός*; *scaeuos* (left-), cf. *σκαίFός*; *caecus* (blind), cf. Goth. *hailhs* (one-eyed, blind).

Second step is *oi, oe, ū*; e.g. *foid-ere*, n. *\*foid-os* (*foed-us*, § 35. treaty), *√fid*; *über* (fruitful), early Lat. *\*oib-ri-s*, f.f. *āidh-ri-s*, cf. Sk. *ēdh-atē* (he grows), hence *√idh*, *über* (neut. subst. fruitfulness), early Lat. perh. *\*oib-es*, f.f. *āidh-as*, fr. same root; *\*oinos*, *oino(m)*, occurs, *oenus*, *ūnus* (one), cf. Goth. *ains*; *comoinem*, *comūnem* (common, acc.), cf. Goth. *gamains*; so we find *loidos*, *loedos*, *lūdus* (game); *oitier*, *oetier*, *ūtier* (use), etc.

*Note*.—For *oe* we find *ē* written by mistake (cf. Fleckeisen, 5th Art. aus einem Hilfsbüchlein für Lat. Rechtschreibung, Frankf. 1861, p. 22), e.g. *ob-ēdire* for *ob-oedire*, cf. *audire*, *n-ēnum*=*n-oenum* (*non*).

### 3. *u*-scale.

§ 36.

Very much obliterated in Lat. Exx. are very rare: we can bring forward only *lūc-erna* (lamp), Gk. *√λυκ*, Sk. *ruk*, f.f. *ruk*, beside *Leuc-esie* (Carm. Sal.), *Louc-ina* (nom. pr.), *lūcem* (light, acc.), *lū(c)-men* (light), *lou(c)-men*; *dūc-em* (leader) beside *douc-ere*, *dūc-ere* (lead); *rūb-er* (red), f.f. *rudh-ra-s*, beside *rūf-us* (red), f.f. *rāudh-as*; *pro-nūb-us* (marriage-making), *in-nūb-us* (unwedded), beside *nūb-o* (marry—of the woman); *rūp-es* (rock, cliff) fr. *√rup*, in *ru-m-p-o* (break); *trūd-o* (thrust) beside *trūd-i-s* (thrusting-pole).

The fund. vowel *u*, e.g. in *rup-tus* (broken), *ru-m-p-o* (break), cf. Sk. *lu-m-p-āmi*, *√lup*, origl. *√rup*; *us-tu-s* (burnt), *√us*, Sk. *√uś*; *tu-tud-i* fr. pres. *tu-n-d-o* (thump), cf. Sk. *tud-āmi*, *√tud*; *rub-er* (red), for *\*ruf-er*, *\*ruf-ro-s*, *√ruf*=*ῥυθ*, Sk. and origl. *√rudh*; *iug-um* (yoke)=*ζυγ-όν*, Sk. *yug-ām*, *√yug*; *fu-i* (was), *fu-turus* (about to be), cf. *φν-ρόν*, origl. and Sk. *√bhu* (in Sk. lengthened *bhū*). In stem-formn. (not in stem-formative particles), e.g. *pec-u* (cattle, pl. *pecu-a*), cf. Goth. *fuihu*, O.H.G. *vihu*, Sk. *paśu-s*.

This genuine *u* was also weakened to *i* (*ü*) [like that which arose from *a*, cf. § 32], e.g. *lub-et*, *lib-et* (it pleases), Sk. and origl. *√lubh* (desire), Goth. *lib* (in *lub-ō*, beloved, *liub-s*, love; *ga-laubs*, dear); *cli-ens* (hearer), *√clu*, *√κλυ*, origl. *kru* (hear);

§ 36. \**manu-bus*, and hence *mani-bus* (*manu-s*, hand), *u* is noticeably preserved in many cases; *fructi-fer*, *corni-ger*, fr. \**fructu-fer*, \**cornu-ger* (fruit-bearing, horn-carrying).

Note 1.—Genuine *u* does not change to *o* except in *fö-re* fr. *fü-se*,  $\sqrt{fu}$ .

Note 2.— $\bar{u}$  as lengthening from  $\bar{u}$  is prob. not to be separated fr.  $\bar{u}=ou$ , 1st and 2nd step-formn. of *u*. In *tū* (thou), we have an unorigl. lengthening, f.f. is *tū*, for in Sk. *tv-am*, Gk. *τύ, σύ*, Goth. *thu*, Scl. *ty*, there is no step-formn. We cannot decide between lengthening and step-formation in cases like *sū-s* (boar), *ūs*, O.H.G. *sū*; *mūs* (mouse), *μῦς*, O.H.G. *mūs*, etc., where Gk. vouches for the hypothesis of the lengthening.

The first step-formn. (acc. to analogy of all Indo-Eur. langg.)—sounded of course precisely as in Gk.—was *eu*; but it was lost very early, since the only remaining instance of this archaic step-formn. is in *Leuc-esius* (n. prop.), cf. *λευκ-ός* (white), also *Loucetius*, *Lucetius*; f.f. is prob. \**Leuc-ent-ios*, a further formn. fr. a particip. st. \**leuc-ent-* (as *Prudent-ius* fr. *prudent-*), of a pres. \**leuc-o*,  $\sqrt{luc}$ , as *φεύγ-ω* fr.  $\sqrt{\phi v \gamma}$ . In consequence of the sound-law mentioned § 33, (*e* before *u*, *v*, changed to *o*), there will arise fr. *eu* an *ou*, coinciding with 2nd step, and later becoming  $\bar{u}$ . Hence from *dūc-o* (lead), *douco*, we must infer an older \**deuco*, f.f. *dauk-āmi*,  $\sqrt{duk}$  (because pres. stt. of this kind were formed by the 1st step); *ūro* (burn), \**ouso* for \**euso*=*εὔ-ω* for \**εῦσ-ω*, Sk. *ḍś-āmi*, f.f. *aus-āmi*,  $\sqrt{us}$ ; in roots which end in *u* we find *ov* for \**ev*=*eu*, e.g. \**plou-ont*, thence *pluu-ont*, *plu-ont* (they rain); \**plou-ont*, however, is for \**pleu-onti*, cf. Gk. *πλέF-οντι* (*πλέ-ουσι*), f.f. *plav-anti*; so *flu-ont*=*flou-ont*, fr. \**fleu-onti*, and other similar pres. fms.; *iou-s*, *iour-is* (*iūs*, *iūr-is*, right), is for \**iou-os*, \**iou-es-is*, and formed like \**gen-os*, \**gen-es-is* (gen-us, gen-eris), fr.  $\sqrt{i u}$  (iungere), by the first step, as is usual in this kind of noun st., \**iou-os* is thus for \**ieu-os*, formed fr.  $\sqrt{i u}$  like *κλέF-ος* fr.  $\sqrt{\kappa \lambda \nu}$ , and corresponding Sk. *grāv-as* fr.  $\sqrt{gru}$ ; *iūs*, *iūr-is* (broth)=\**iou-s*, \**iour-is*, \**iou-os*, \**iou-es-os*, \**ieu-os*, \**ieu-es-os*, f.f. *yav-as*, *yav-as-as*, fr. another  $\sqrt{yu}$ , Gk.  $\sqrt{\zeta \upsilon}$  (in *ζύ-μη*, yeast), cf. Scl.

*iu-cha* (broth); *pūs* (*pūr-is*, matter)=\**pous*, \**pou-os*, \**peu-os*, f.f. § 36. *pav-as*, Sk. and origl.  $\sqrt{pu}$  (be foul), cf. Goth. *fu-ls*, perh. *fū-ls*, O.H.G. *fū-l*, N.H.G. *fau-l*, f.f. *pau-ra-s*, Lith. *pū-ti* (be foul). Also *Iou-em*=*Diouem* (acc. n. pr.) must be referred to \**dyev-em*, and clearly *Iū-piter* stands for \**dyū-piter*, \**dyou-piter*, and the latter for \**dyeu-piter*, st. *dyeu*=*ξev*-, which is merely a sound-variation fr. *dyeu*,  $\sqrt{dyu}$ =*div* (shine, as noun-st. 'heaven' and 'god of heaven'; Sk. nom. *dyā-us* (2nd step) does not correspond with the Lat.): here the 1st step is much commoner than the 2nd, so that Lat. *ū* must generally be referred hither as= Old-Lat. *ou*.

*Note*.—*neu*, *seu*=*neue*, \**seue*, do not belong here strictly, any more than *ne-uter*, *ne-utiquam* (also *nutiquam* like *nullus*).

*au*, as in Gk., is a first step long since unused, and in Lat. the only diphth. retained, and not yet given up (it occurs still in Ital. and in more isolated cases in other Latin lang.), although even in early times it was weakened, esp. in popular dialects, to the sound *ō*; further *au* is contr. into *ū* (prob. through intermed. *ō*), e.g. *raud-us*, *rōd-us*, *rūd-us* (crumb of earth),  $\sqrt{rud}$ , elsewh. *rub*, *ruf*,  $\sqrt{rudh}$  (be red). Exx. of *au*: *aur-ōra* (dawn), f.f. prob. *aus-āsā*,  $\sqrt{us}$  in *ūr-o*, *us-tus*, cf. Sk. st. *uś-ās-* (aurora), without step-formn. in root and suff. (the latter occurs in certain cases only); *aug-eo* (I increase), cf. *αὔξω*, *αὐξάνω*, prob. fr. \**avry-σo*, \**avry-σavω*, Lith. *aug-u* (I wax),  $\sqrt{ug}$ ; the above-mentioned *raud-us* (neut. pl. *raud-era*),  $\sqrt{rud}$ , Sk.  $\sqrt{rudh}$ , Gk.  $\sqrt{pv\theta}$ , etc.

*Note*.—*au* can also arise through a secondary process, e.g. *nauta* (sailor), *auceps* (bird-catcher), *gaudeo* (am glad), fr. *nāu-i-ta*, \**au-i-ceps*, \**gāu-i-deo*, etc.

The second step of *u*, viz. old Lat. *ou*, later *ū*, is equally wanting with the 1st step, and it is only by the aid of the cognate langg. that we can detect whether *ou*, *ū*, represent origl. *au* or *āu*: the latter is certain only in rare instances, e.g. *rūf-us* (red)=Kelt. *rúad*, Goth. *raud-s*, f.f. *rāudh-as*; clearly

§ 30. here belongs *über* (udder), on acct. of Gk. *οἰθαρ*, f.f. of both *audhar*, though Sk. *ūdhas*, O.H.G *ūtar* (H.G. *euter*), show other degrees of the scale: perh. also *lūc-em*, *Louc-ina*, *lū(c)men*, *✓luk*, origl. *✓ruk*.

*Note.*—*ū*, *ou*, are here and there secondary products through falling-out of sounds, as e.g. *\*cuncti*, *cuncti* (all together), fr. *co-iuncti*; *noundinum* (S.C. de Bacc.), *nūndinum*, fr. *\*nouendinum*, cf. *nundinae* (period of 9 days), *prūdens* fr. *pro-uidens*.

§ 37.

### VOWEL SOUND-LAWS.

Accurate statement of the extraordinarily variable vowel sound-laws of the Lat. must be left to the special-grammar of the lang.: a general view only can be given here.

*Hiatus.* In case of vowels coming into contact with one another, hiatus is often obviated by means of contraction. This occurs regularly, when the first vowel is *a*, thus *amo* (1 sing.) fr. *\*amao*, *amas* (2 sing.), fr. *\*amais*, f.f. of termn. *-ayāmi*, *-ayasi*; *amarunt* (3 pl. pf.) fr. *ama(u)erunt*; *equae* and *equā* fr. *equāi* (d. sing.); *diē*, *fidē*, fr. *diēi*, *fidēi*, etc. Other exx. are found in *sīs* fr. *siēs*, *sit*, earlier *seit*, fr. *siēt*, f.f. *syāt*; *tibī*, *tibei*, fr. *tibie*, f.f. of termn. *-bhya(m)*; so too in *uōbeis*, *uōbis*, f.f. of termn. *bhya(m)s*; *senatūs* (gen. sing.) fr. *senatuis* (*-tuos*), *senatu* (d. sing.) fr. *senatui*, *cōgo* fr. *\*co-igo*, *equo* (d. sing.) fr. *equōi*, etc. Both vowels, however, remain in many cases, esp. *u* and *i* with its kindred *e* make no hiatus with follg. vowels, e.g. *fui*, *lues*, *fluunt* (*fluont*); the noun-termns. *-io*, *-ia*, *-ies*; *fieri*, *tenuia* (*tenvia*), *eunt*, *eo*, *meae*. In combination even *co-actus*, *de-esse*, *co-optare*, but also medially, *boo* (*boare*), etc. Hiatus in the middle of a word is almost always brought about by loss of consonn., e.g. *fluunt* fr. *fluont*, *boo* fr. *bouo*, etc. The laws of hiatus in Lat. need a further and more accurate settlement.

§ 38. Assimilation exercises a wide-spread influence; vowel assimilates vowel, both forwards and backwards, and also in case of indirect contact of vowels (passing over consonn.), causing both



partial and complete similarity; and the same effects are produced § 38. by consonants upon vowels (relationship between particular consonantal- and vowel-sounds). And, moreover, by this means immediate contact betw. like vowels is avoided, and dissimilation takes place.

Thus *aureolus*, *gladiolus*, even *vinolentus*, etc., stand for \**aureulus*, \**gladiulus*, \**vinulentus*, fr. *aureu-s*, *gladiu-s*, *uinu-m*, cf. *longulus*, *turbulentus*; *duritie-s* beside *duriti-a*, etc.; cf. *siēm*, *siēs*, *siēt*, with Sk. *syām*, *syās*, *syāt*. In these and similar cases we see an assimilating influence of foregoing vowels on those follg.; consequently *o* is nearer to *e* and *i* than *u*, and *e* more akin to *i* than *a*.

A reflexive assimiln. passing over cons. occurs, e.g. in *ex-ul* but *exil-ium*, *facul-tas* but *facil-is*, *sta-bulum* but *sta-bilis*; *mihi*, *tibi*, but Umbr. *mehe*, *tefe*; *bene* but *bonus*.

For relation between *o* and *u*, vide § 33, 2; *u* has a special affinity for labials, and above all *m* and *l*. Hence from weakened *a* we get, not *i*, but *u*, in cases like *oc-cup-o*, *au-cup-ium*, bes. *capere*, *con-tubernium* (chummage) beside *tab-erna* (hut), *op-tum-us* (later only, *optimus*), etc.; bef. *l* older *o* became *u*, e.g. *poculum* fr. *pocolom*, *consul* fr. *cosol*, *epistula* fr. *ἐπιστολή*; through this weakening of *a*, before *l*+cons. we find *u*, not *i* or *e* (the regular representative of *i* before 2 consonn.), e.g. *salsus*, *insulsus*, *sepelio*, *sepultus*, etc.; further, *u* has remained before *n*+cons., e.g. *ferunt*, *homunculus* (cf. supr. § 32). Throughout, it represents here too an earlier *o*, wh. maintained itself intact in the popular diall., as later inscrr. and Ital. (e.g. *sepultura* as early as 558 A.D., cf. Ital. *sepolcro*, *colonna*, Ital. *colonna*) prove.

Even origl. *i*—not weakened fr. *a*—gives way to *u* in cases like *testu-monium* (witness) beside *testi-s*; *carnu-fex* (flayer) beside st. *carni-* (n. *caro*, flesh), and the like; where, nevertheless, the analogy of the commoner cases may have had some influence.

*e* is retained by preference in final syll. bef. nasals, e.g. *septem*, cf. *ἐπτά*, *nōmen*, Sk. *nāman-*, *cornicen*, *✓can*, *ouem* fr. *oui-m*, and

§ 38. so in most *i*-stems; in acc. sing. of *a*-stem nevertheless we find *o*, *u* (*nouo-m*, *nouu-m*); but above all *e* is found bef. *r*, e.g. *camera* fr. *καμάρα*, *operis* beside *nominis*; *stetērunt* for \**steti-sonti*, cf. *stetis-ti*; *ueher-is* fr. *uehis-is*, cf. *uehit-ur*; *peperi* for \**pepiri*, fr. *pario*, like *cecini* fr. *cano*; *affero*, not \**af-fir-o*, wh. we might look for acc. to analogy, comparing such cases as *colligo* fr. *lego*.

*r* has also a preference for *o* (= *u*) preceding, e.g. *fo-re*, *fo-rem*, fr. *√fu* (*fu-turus*); Lat. *ancora* fr. Gk. *ἄγκυρα*; but *robur*, *ebur* with *u*, perh. on account of preceding *b*.

Further, *e* occurs bef. two or more consonn. interchangeably with *i* bef. one cons., e.g. *iudex* but *iudicis*; *eques-ter* for \**equet-ter*, \**equit-ter* but *equit-em*; *asellus* fr. \**asin(u)lus*, cf. *asinus*; *consecro*, *abreptus*, etc. (but it remains *i* bef. *ng* in *attingo*, *infringo* and the like).

The sound-combinations *ent*, *end*, and *unt*, *und*, are weakened forms, e.g. *fer-ent-em* beside *e-unt-em* fr. \**e-ont-em*, where the earlier sound *o*, *u*, has been kept in consequence of dissimiln., beside *e*, *uolunt-arius*; *faciendus* and *faciundus*, both fr. \**faciondus*, remain in 'sacris faciundis,' 'iure dicundo,' and the like. After *ui*, *e* is invariable: *tu-endus*, *restitu-endus*. *a* is throughout the origl. vowel in these cases.

*i* has a special affinity to *n* and *dentals*, and is the commonest weakening fr. *a*, e.g. *μηχανή* but *māchina*; *nominis*, *hominis*, *cecini*, fr. stems *gnāman-*, *ghaman-*, *ka-kan-*, etc.

By dissimiln. is prevented the combn. of two like vowels, e.g. *ueri-tas* fr. *ueru-s*, but *pie-tas* (*piu-s*), *ebrie-tas* (*ebriu-s*), etc., not \**pīi-tas*, etc.; *equit-is* (*eques*) but *abiēt-is*, *ariēt-is*, *pariet-is* (*abies*, *aries*, *paries*); *diuinus*, *diuo-s*, but *aliēnus* (*aliu-s*); *lēui-gare* (*lēuis*) but *uarie-gare* (*uariu-s*), etc. The first vowel is changed in *mēio* fr. \**mīg-yo*, \**māio*: *ei*, *dei*, are older and more correct than *ii*, *dii*, etc. Through dissimiln. *o* kept ground longer after *u*, *v*, e.g. *equos*, *equom*, *nouom*, *mortuos*, etc.

§ 39. Through loss of consonants vowel-change takes place, viz.  
1. Compensatory lengthening; 2. Contraction.

1. Compensatory lengthening, e.g. *pēs*, *ariēs* = \**pēd-s*, § 39. *ariēt-s*; a regular shortening has here taken place later (§ 41), e.g. *pedēs* fr. *pedēs* = \**pedēt-s*, *patēr* fr. *patēr* = \**patēr-s*; *ferēs* = \**ferēt-s* (cf. *φέρων* = *φεροντ-s*); *sāl* (salt) = *sāl-s* (gen. *sāl-is*), cf. *āls*, etc.; esp. often through loss of nasal bef. *s*, e.g. acc. pl. of *a-st.* -*ōs* (*nou-ōs*) = -*ons* (f.f. *nav-ans*); in compar. -*iōr*, -*iōrem*, fr. -*yans*, -*yansam*, etc.; further, *pōno* (place) = \**pos-no* (cf. *pos-ūi*), *quini* (by fives) = *quīnci*, *exāmen* (swarm) = *exāg-men* (*āgo*); thus *g* falls out esp. bef. *y*, e.g. *māior* (greater) = \**māg-ior*, cf. *mag-nus* (great), *āio* (say) = \**āg-io* (cf. *ad-āg-ium*, proverb), *mēio* (urino) = \**mīio* = \**mīgyo*, etc.

2. Contraction (vid. supr. § 37), e.g. *amārunt*, *amāsti*, *nōrunt*, *amō* (fr. \**amao*), *docēs*, *audīs* (fr. \**doce-is*, \**audi-is*); *nouīs* = \**nouo-is*, \**noua-is* fr. \**nouo-bios*, \**noua-bios* (v. Decl.), etc. In redupl. perf. this case is very clear, e.g. *fēci* fr. \**fēcici*, cf. *cecini*, likew. *iēcī*, *frēgi*, etc.

*Note.*—Cases like *inuitare* (invite) = \**uicitare*, √*uōc*; *conuītium* (wrangle) = \**conuīcitium* √*uōc*; *suspītio* (suspicion) = \**suspicitio*, etc. (on the last ex. cf. Fleckeisen, Rhein Museum, viii. 227; on the other side Corssen, Kritik. Beitr. s. 12 sqq., who writes *suspīcio*, *conuīcium*, and derives them accordingly, but assigns *inuitare* to an ambig. Sk. √ *vī*). Cf. § 77, 1. a. sub fin.

Weakening (lightening of vowels by change of quality § 40. with and without shortening) is very common in Lat., and throughout not exclusively confined to unaccentuate sylls., whence probably too the analogy of this weakening arose (cf. supr. § 32, 2; on the question cf. G. Curtius, das dreisilbengesetz der Gk. u. Lat. betonung, in Kuhn's Zeitschrift, ix. 321 sqq.). Esp. regular is the occurrence of weakg. in sylls. of word-formation; in composition and in reduplication, but also in root sylls. Nevertheless, that the weakening did not invariably occur in the second member of a compound is proved by exx. such as *com-paro*, *per-agro*, *per-actus*, etc. (Corss. Kuhn's Zeitschr. xi. 370). Through weakening

§ 40. *a* becomes *e*; *fall-o* *fē-fell-i*, *parc-o* *pe-perc-i*, *fac-tus* *per-fec-tus*, etc.

*a* becomes *u*; *cap-io*, *oc-cup-o*; here belongs the *u* of the unaccentuated final sylls., e.g. *da-tu-s* f.f. *da-ta-s*; early Lat. *oper-us*, Sk. and f.f. *apas-as*, etc.: the change fr. *a* to *u* is through intermed. *o*.

*a* becomes *i*; e.g. *fac-io* *con-fic-io*, *pa-ter* *Iupi-ter*, *cad-o*, *ce-cid-i*, *can-o*, *ce-cin-i*, etc.; the change must be through intermed. *e*. *e* occurs for *i* acc. to the above-stated rule, in cases like *tubi-cen*, *pe-per-i*, *oper-is* for \**opis-is* (*opos-os* f.f. *apas-as*), etc. Cf. § 38.

*ā* becomes *ē*; *hāl-o* *an-hēl-o*.

*ae* becomes *i*; *quaer-o* *an-qr-r-o*, *caed-o* *ce-cid-i* *con-cid-o*, *aequos* *in-īquos*, etc.

*au* becomes *ō*, *ū*; *caus-a* *ac-cūs-o*, *fauc-es* *suf-fōc-o*, *plaud-o* *ex-plōd-o*, etc.

Even long vowels and diphths. became *i* (*ē*) by more marked shortening, e.g. *gnō-tus* *co-gnī-tus*, *iouro* (*iūro*), *pe-iēro*, *de-iēro* (*-yēro* for \**-yi-ro*, with *e* for *i* bef. *r*, cf. § 38).

Before secondary suffixes, and as 1st member of compds., stems in *o*, *u*, weaken their stem-termns. before consonn. to *i*, e.g. *duri-tas*, *duri-ties*, st. *duro-* (*durus*); *corni-culum*, *corni-cen*, *corni-ger*, st. *cornu-*, etc.

Bef. vowels *u* remains, e.g. *fructu-arius* *fructu-osus*, st. *fructu-*; it also keeps ground bef. labials, e.g. *locu-ples*, *quadru-pes*, *quadru-plex*.

§ 41. Also shortening of vowels in unacc. final sylls. prevails very widely.

Thus *ā* in fem. is origl. *ā* (Sk. *ā*, *ṛ*), hence kept long sometimes in earlier Latin; *ē*, in abl. sing. of *i*-st. and of conson. stems, following their analogy, is origl. *-ait*, thence *-aid*, *-eid*, *-ēd*, *īd*, later *-ei*, *-ē*, *-ī* (so *patrē*, tit. Scip. Barb.); *ē* of the vb. sometimes appears short, e.g. *cauē*, *iubē*; *i* in *mihi*, *tibi*, *ubi*, etc., is fr. earlier *ī*, *ei* through shortening, *mihei*, *tibei*, *ubei*, occur not seldom: final *ō* always represents origl. *ō*, e.g. *homō* = \**homon-s*;

*agō* cf. ἄγω, f.f. *ag-āmi*, next step *ag-ā* by loss of *mi*; *egō* cf. § 41. ἐγώ; in these cases the nasal may have caused the dulling of *ā* to *ō*; *duo*, *ambo*, *octo*, cf. δύο, ἄμφω, ὀκτώ.

Shortening occurs regularly bef. final *t*; *amā-t* for *-āt* = *-ait*, *-aat* fr. *-ayati*, cf. *amā-mus*; so *-et*, *-it*, in the derived vbs. and in opt. fr. *-ēt*, *-it*, earlier *-eit*: also *-it* in pf. was sounded *-eit* in earlier times, and the like.

Similarly bef. other consonn., e.g. *-is* of opt. (*feceris*) for and beside *-is* (*feceris*); *pa-tēr* fr. *pa-tēr* (cf. πατήρ) for *\*pa-ters*; *-ōr* in nom. sing. fr. *-ōr*, e.g. *censōr* (tit. Scip.) fr. *\*cens-tor-s*, and many more such.

Evaporation in unacc. sylls. brings us to total loss, final and § 42. medial loss of vowels (§ 32).

Final loss of vowels is partly of late date only, e.g. *animal* for and beside *animale*, *dic* for and bes. *dice*, *hoc* for and bes. *hoce*, *ut* for and bes. *uti*; partly older, e.g. *uehis* for *\*uehisi*, f.f. *vaghasi*; *est*, *uehit*, for *\*esti*, *\*uehiti*, f.f. *asti*, *vaghati* (*tremonti* has remained, Bergk. index lect. Marburg, 1847-8), etc.

Medial loss of weakly-accented vowels is esp. common in Lat., and occurs (1.) bef. vowels, e.g. *minor*, *minus*, for *\*minior*, *\*minius*; *nullus* for *ne-ullus*, etc.; cases can be produced where no contraction has taken place, e.g. *un-ōculus* (*uno-oculus*), *sem-ānimus* (*semi-animus*), *nūtiqum* (*ne-utiqum*). (2.) bef. consonn., the commonest case, e.g. *alumnus*, *uertumnus*, for *\*alumenus*, *\*uertumenus*, suff. = Gk. *-μεινο-*, Sk. *-māna-*; *stella* for *\*sterla* fr. *\*sterula*; *puella* for *\*puerla* fr. *\*puerula*; *misellus* for *\*miserlus* fr. *\*miserulus*; *patrem* for *\*pater-em*, st. *pater-*; *rettuli* fr. *\*re-tetuli*; *reppuli* fr. *\*re-pepuli*; *repperi* fr. *\*re-peperi*, and so on. Thus the loss of medial vowels is chiefly approved betw. like consonn. (as in Mid.H.G., Zeitschr. x. 160). Unacc. *i* may altogether disappear, e.g. *dixi* fr. *dixisti*, *ualde* fr. *ualide*, *gaudeo* fr. *\*gauideo* (cf. *gavius*), etc.

Of special importance in treatment of declension is the medial loss of origl. *a* and *i*, i.e. *o* or *u* and *i* before the *s* of nom. sing.

§ 42. Thus arises *puer*, etc., fr. \**puers*, which comes fr. *puero-s*, *puerus* (in existence), *uir* fr. \**uirs*, \**uiros*, *acer* (§ 43) fr. *acris*, etc. This is noticeably regular after *r* with short syll. precedg.; hence *quatuor* stands for \**quatuors*, \**quatuores*, cf. τέσσαρες, Sk. *kātvāras*; after the vowel had been lost, the *s* also fell off from the *r*. Such forms as *fumul* (Enn. Ann.) are obsol.; it stands for \**fumuls* fr. *famulos*, *damnas* for \**damnats* fr. *damnatos*; *alis* for *alios* (vouched for more than once); *Sallustis*, *Clodis* (Inscr.) for *Sallustios*, *Clodios*, etc.; *alid* for \**aliod*, *aliud*.

Loss of *i* in *i-st.* is remarkably common, whereby its Lat. nom. has become thoroughly confused with that of conson. stems, thus e.g. *primas* for older *primatis*, *gens* fr. \**gents* and this fr. \**gen-ti-s*, *mors* for \**morts* fr. \**mor-ti-s*, fr. √*gen*, origl. *gan* (gignere), and √*mor*, origl. *mar* (mori), f.f. therefore *gan-ti-s*, *mar-ti-s*, and the like. Further *acer* for and bes. *acris*, *uigil* fr. *uigilis*, etc.

*Note.*—The occasional omission of vowels in the text of Inscr. which could not take place in the spoken lang. (e.g. *decumius*, *fecit*, *uixit* for *Decumius*, *fecit*, *uixit*) has been pointed out by Ritschl. (Rhein. Mus. n. Folge xvi. p. 601 sqq.; xvii. p. 144 sqq.).

§ 43. Insertion of a helping-vowel likewise sometimes occurs in Lat., e.g. *s-u-m* fr. \**es-mi*, \**es-u-mi*, origl. *as-mi*; *s-u-mus* fr. \**es-mus*, \**es-u-mus*, origl. *as-masi*; *uol-u-mus* fr. \**uol-mus*, f.f. *var-masi*, cf. *uol-t*, f.f. *var-ti*; *teg-u-mentum* (hence *teg-i-mentum*) bes. *teg-mentum*, and the like belong likewise here; *u* is here the helping-vowel on account of *m* following, cf. *drach-u-ma* (Plaut.) fr. δραχμή, since in general a similar vowel-insertion was admitted in foreign words, as e.g. *tech-i-na* (Plaut.) from τέχνη, etc.

Bef. *r*, *e=i* (§ 38), e.g. *um-e-rus* (shoulder) bes. Sk. *āsa-s* for \**amsa-s*, *rub-e-r* (red) for \**rubr* fr. \**rubrs*, \**rub-ro-s*=ἐρυθρό-ς, Sk. also with helping-vowel *rudh-i-rd-s*, origl. *rudh-ra-s*; *gener* (son-in-law) for \**gen-r(o-s)*, cf. γαμβρός for \**γαμ-πό-ς*; *ager* (field) for \**ag-r(o-s)*, Gk. ἀγρό-ς; *caper* (he-goat) for \**cap-r(o-s)*, a form like κάπρ-ος (boar), etc.

The common helping-vowel *i* may generally be regarded as § 43. a weakening of an older *u* or *e*: it occurs rather irregularly (cf. Ritschl. Rh. M. n. F. 1862, 607 sqq.) in e.g. *mor-i-turus* bes. *mor-tuos*, *or-i-turus* bes. *or-tus*, etc. After the analogy of consonl. roots this *i* is found also in the case of roots ending in a vowel, e.g. *ru-i-turus*, *di-ru-i-tus* bes. *diru-tus*, *tu-i-tus* bes. *tu-tus*, etc.

## B. CONSONANTS.

## § 44. CONSONANTS OF THE INDO-EUROPEAN ORIGINAL LANGUAGE.

The consonn. in Indo-Eur. are specially distinguished from the vowels, setting aside their physiological conditions, in that they are fixed and invariable in roots (we may pass over the changes which they undergo in consequence of sound-laws that are always secondary), but cannot, like vowels, raise themselves in a definite scale of gradation. Whilst the nine origl. vowel-sounds of the Indo-Eur. can be reduced to three fundamental vowels, the consonn. are collectively independent of one another. Whilst the vowels by means of their step-formation according to meaning thereby serve for the expression of *relation*, consonn. are merely elements of expression of *meaning*; no relationship is expressed in Indo-Eur. by the use of root-consonn.

The Indo-Eur. origl. lang. has fifteen consonn., which in § 1 are classed according to their physiological conditions, viz. three momentary mutes, three mom. sonants, three mom. son. aspirates, three spirants, and three so-called liquids, i.e. two nasals and *r*. The existence of *b* (mom. son. labial) in the origl. lang. cannot be authenticated by any perfectly certain example: but it is highly probable that it did exist, as the origl. element of the frequent aspirate *bh*. The number of origl. consonn. is also much greater than that of the vowels (prob.  $3 \times 3$ , but certainly  $2 \times 3$  existed).

The aspirates, as double sounds, seem to be foreign to the most original condition of the lang., and to have developed only in later times: but they certainly existed before the first splitting-up of the origl. lang., for they are found in the three divisions of the Indo-Eur., or at least they can be detected;



that is, they occur in Aryan and in S.-European; in N.-Euro-§ 44.  
pean likewise they must once have existed: the Teutonic has  
them, it is true, like the other northern langg., changed to  
*sonants*, but the origl. *sonants* are distinguished from them by  
becoming *tenues*.

Consonantal sound-laws had not arisen so early as the  
origl. lang.; consonn. can be placed anywhere, and in any com-  
bination which the organism of the lang. required, because these  
combinations (e.g. *vāk-bhis* inst. pl. fr. st. *vāk*, *voice*) were not  
yet so close that those consonn. which are brought together by  
word-formation exercised any influence on one another (thus  
e.g. in *vāk-bhis* the influence of *bh* on *k* produces as early as  
Sk. the fm. *vāg-bhis*: *k* has here changed bef. sonant *bh* into  
its corresponding son. *g*: on the improbability of origl. inter-  
change of *i*, *u*, with *y*, *v*, cf. § 3).

## EXAMPLES.

§ 45.

## Momentary mute unaspirated consonants.

1. *k*. *ka-s* (who), *ka* (-que, and), *katvār-as* (four), *kankan*  
(five), *kard* (heart), *√kak* (cook), *√ka* and *ak* (be sharp, quick),  
*√ki* (lie), *√kru* (hear), *kru-ta-s* (heard), *kvan-s* (dog), *√skid*  
(cut), *√vak* (speak), *√dak* (bite), *√dik* (show), *√ruk* (light),  
*ak-man-s* (stone, heaven), *dakan* (ten), *varka-s* (wolf); sf. -*ka*, etc.

2. *t*. *ta-t* (that), *tu* (thou), *√ta*, *tan* (stretch), *tri* (three), *√sta*  
(stand), *stag* (cover), *√pat* (fly, fall), *√prat* (broad), *√vart* (turn);  
common in stem- and word-formative particles, e.g. sf. -*ta* (pf.  
pt. pass.), *bhara-ti* (fer-t), *ragh-is-ta-s* (ῥάχιστος), etc.

3. *p*. *√pa* (drink), *√pa* (protect, rule), thence *pa-ti-s* (lord)  
and *pa-tar-s* (father), *par* (fill), hence *paru-s* (many) and *par-na-s*  
(full), *√pad* (go) as noun-st. n. sing. *pad-s* (foot), *pratu-s*  
(πλατύς), *√pru* (flow), *prav-ati* (he flows), *√spak* (see, look),  
*√sarp* (creep, serpere), *√tap* (burn, heat), *√svap* (sleep) thence  
*svap-na-s* (sleep, n.), etc.

## § 46. Momentary sonant unaspirated consonants.

1. *g*. √*ga* (go), 1 sing. pres. *ga-gā-mi*, √*ga*, *gan* (be born), √*gan* (know), √*ag* (agere), *ag-ni-s* (ig-ni-s), √*grabh* (grasp), √*yug*-*g* (iungere), thence *yug-am* (yoke, iug-um), etc.

2. *d*. √*da* (dare), 1 sing. pres. *da-dā-mi*, √*dak* (bite), √*dam* (tame, domare), *dama-s* (domus), √*dik* (show), √*div* (shine), st. *dva-* (two), √*ad* (eat), √*sad* (sit), √*vid* (uidere), 1 sing. pres. *raid-mi*, etc.

3. *b*. I know of no certain example of this sound.

*Note.*—The Teutonic and Gk. forms of those words that show *b* in the Aryan and S.-European langg. point partly to *bh*, e.g. Sk. √*bandh* (bind), but Goth. *band*, f.f. therefore *bhandh*, Gk. √*πενθ* for \**φενθ*, *πενθ-ερός* (affinis), *πείσμα* for \**πενθ-μα* (cable); Sk. *bāhús* (fore-arm), Gk. *πῆχυς* for \**φηχυς*, N.-Eur. *bōgr*, O.H.G. *puoc*, origl. initial-sound *bh*; Sk. √*budh* (know), Gk. √*πυθ* (*πυνζάνομαι*) for \**φυθ*, Goth. *bud*, not \**puð*, as might be expected fr origl. *b* (moreover the Goth. root, notwithstanding the difference of function, is identical with *budh*, *πυθ*); if *b* were origl., the Gk. fms. would be \**βενθ*, \**βηχυς*, \**βυθ*. These three roots have a final asp., which was the effect of the disappearance of an origl. asp. at the beginning in Aryan and Gk. (this conjecture has been ably confirmed by Grassmann, *Zeitschr.* xii. 110). In other instt. we lack decisive representatives in N.-European, e.g. *βραχύς*, *brevis*, Slav. *brǔžǔ*; Sk. √*lab*, *lamb* (labi, labi; 3 sing. pres. *lāmbatē*), Lat. *lab*. (*lāb-itur*), etc.; *κάνναβις* (hemp), Norse *hanpr*, O.Bulg. *konopl̑ya*, a doubtful and borrowed form. Grassm. *Zeitschr.* xii. 122 sqq. shows it to be likely that *b* did not exist in Indo-Eur., at least at the beginning of a word. Nor have I found any certain exx., ap. Bickell *Zeitschr.* xiv. 425 sqq., of the origl. existence of *lab* son. in Indo-Eur.

## § 47. Momentary sonant aspirated consonants.

1. *gh*. √*ghar*, *ghra* (burn, shine; be green, yellow), *ghans-s* (m.f. *goose*), √*stigh* (step), √*agh*, *angh* (be tight), √*vagh* (uehere), √*migh* (mingo), √*righ* (lick), *dargha-s* (long), etc.

2. *dh*. √*dha* (set, make), 1 sing. pres. *dha-dhāmi*, √*dham* (blow), √*idh* (burn), √*rudh* (be, become red) thence *rudhra-s* and *rāudha-s* (red), *madhu* (honey, mead), *madhya-s* (medius), etc.

3. *bh*.  $\sqrt{bha}$  (shine, speak),  $\sqrt{bhar}$  (bear, ferre), 1 sing. pres. § 47. *bhar-āmi*,  $\sqrt{bhu}$  (be, become), 1 sing. pres. *bhav-āmi*,  $\sqrt{bhug}$  (bend, flee), *bhrā-tar-s* (brother),  $\sqrt{grabh}$  (grasp), *nabha-s* (neut. nubes), *-bhi* common case-sf. *bh* is not very common in st.-formative particles.

CONSONANTAL PROLONGED-SOUNDS.

§ 48.

Spirants.

1. *y*. *ya-s* (which), *yuga-m* (yoke, iugu-m),  $\sqrt{yug}$ , *yu* (iungere); very common in st.-formative particles, e.g. *madh-ya-s* (medius), *as-yā-t* (sit, siēt), *bhāra-yā-mi* (φορέω), compar. sf. *-yans* (prob. also *-yant*); also in word-formative sff., e.g. *-bhyam*, *-bhyams*, sf. of dat. sing. pl. *-sya*, sf. of gen. sing. masc. of *a-st*., etc. As a medial sound, *y* is akin to *i*, cf. § 3.

2. *s*.  $\sqrt{sad}$  (sit), *saptan* (seven),  $\sqrt{su}$  (sow), thence *su-nu-s* (son),  $\sqrt{sru}$  (flow),  $\sqrt{svid}$  (sweat),  $\sqrt{sta}$  (stand),  $\sqrt{star}$  (strew),  $\sqrt{smar}$  (remember),  $\sqrt{as}$ , pres. *as-mi* (sum),  $\sqrt{us}$  (urere),  $\sqrt{vas}$  (dwell, clothe oneself),  $\sqrt{tars}$  (torrere, thirst), *sra-star-s* (sister); common in word-formative partt., e.g. *akva-s* (equos), nom. sg. masc., *akvā-sas*, nom. pl. masc., etc.; also in st. forms, e.g. *man-as* (mind), etc.

3. *v*.  $\sqrt{va}$  (flow),  $\sqrt{vam}$  (uomere),  $\sqrt{vak}$  (speak), thence *vāk-s* (voice),  $\sqrt{vagh}$  (carry, uehere), 1 sing. pres. *vagh-āmi*,  $\sqrt{var}$  (will),  $\sqrt{vart}$  (turn, uertere), *auī-s* (ouis),  $\sqrt{vid}$  (see, know), *naua-s* (new, nousos); in stem-formative partt., e.g. sf. *-vant*, Sk. *-vant*, *-vans*, Gk. *-Fεντ*, *-For*; rarer in word-formative partt., e.g. loc. pl. *-sua*, etc.; *v* as a medial sound is akin to *u*, vid. § 3.

Nasals.

§ 49.

1. *n*. *na*, *an-* (negation),  $\sqrt{nak}$  (die), thence *nak-ti-s* (night), *nava-s* (nousos), *nāu-s*, gen. *nār-as* (nauis),  $\sqrt{gan}$  (be born, know), st. *ana-* (dem. pron.); *n* is common in st.-and word-formative partt., e.g. *par-na-s* (plenus; past part. pass.), *ak-man-s* (stone), *gnā-man* (name), *bhara-nti* (ferunt), etc.

- § 49. 2. *m*.  $\sqrt{ma}$ , *ma-n* (measure, think), thence *ma-na-s* (mind) and *mā-tar-s* (mother),  $\sqrt{mar}$  (mori),  $\sqrt{smar}$  (remember),  $\sqrt{vam}$  (uomere); common in word-formative partt., e.g. *varka-m* (acc. sg.), *ai-mi*, *i-masi* (eo, imus, 1 sg. pl. pres.), etc.; in st-formative partt., e.g. *ghar-ma-s* (heat), *gnā-man* (name).
- § 50. *r*.  $\sqrt{rak}$  (shriek),  $\sqrt{ruk}$  (light),  $\sqrt{rik}$  (liquere),  $\sqrt{righ}$  (lick),  $\sqrt{rudh}$  (rubere), *raghu-s* (light, adj.),  $\sqrt{kru}$  (hear),  $\sqrt{bhar}$  (ferre),  $\sqrt{ar}$  (oriri, ire; arare),  $\sqrt{par}$  (fill); also in stem-formative partt., e.g. sf. *tar*, *bhrā-tar-*, *mā-tar-*, and the like, but not in word-formative sff.

§ 51.

## SANSKRIT CONSONANTS.

The physiologically-arranged table of Sk. consonn. is in § 4, where also their pronunciation is considered. Whilst the vowel system of Sk. is generally original, its conson. system is mixed in many ways with later elements. Hence arises that large number of conson.-sounds which is unparalleled in other Indo-Eur. langg.

The origl. sounds in Sk. are the mom. mutes and sonants, and the sonant aspp. all of gutt., dent., and lab. quality, thus, *k*, *t*, *p*; *g*, *d*, *b* (?); *gh*, *dh*, *bh*; further the spirants *y*, *s*, *v*, and also *n*, *m*, *r*. Thus Sk. still possesses the consonn. of the Indo-Eur. origl. lang. entire. All the rest, nineteen in number, have arisen in pure Aryan words from these fifteen origl. consonn., and are to be treated as parallel fms. of them, which have been called forth according to generally perceptible sound-laws, and through the influence of the non-Indo-Eur. langg. spoken by Dravidian (Dekhanic) peoples who were pressed back by the Aryans, and were the earlier inhabitants of the peninsula of Further India, just as neighbouring langg. very often acquire sounds from one another.

The origin of the so-called Sk. lingual mom. consonn. and ling. nasal (*t̪*, *d̪*, *t̪h*, *d̪h*, *ṇ*) is due to the latter influence, therefore these sounds are peculiar to Indian, and are unknown in this form to other Indo-Eur. langg. Within the Indian these

sounds gain a still wider sway in the course of the development § 51. of the lang. (in the Prākritis). In Aryan words they are variations of their corresponding dentals.

Further the palat. mom. sounds and their nasal are all unorigl. (*ḳ, ġ, ḳh, ġh, ṇ*); they have arisen from the corresponding gutturals; and so is the pal. mute spirant *ġ*, which is a variation fr. *ḳ*. The law acc. to which the gutt. partly pass into palatals, partly remain, is hitherto unexplained in particular cases (however, that the change of gutt. into palat. did not occur till late, is implied by the circumstance that the gutt. were reduplicated by means of the corresponding palatals).

Unorigl. also are all the tenues aspp. (*kh, th, ph*; in the case of *ḳh* and *ṭh* the unoriginality is sufficiently clear from the nature of the unaspp. sound), whose origin is in known cases mainly caused by foregoing *s* (*kh, ḳh=sk, sth=st*).

Unorigl. also is *h*, which mostly represents *gh*, sometimes also other aspp.; *ś* occurs partly acc. to definite sound-laws, partly without perceptible reason for *s*; *ṣ* (visarga) is an altogether late variation of *s*, and confined almost entirely to the termination.

The gutt. and palat. nasals stand only bef. mom. consonn. of their own quality, by which therefore they are conditioned; the nasalisation of the vowels (̣) is likewise dependent on the follg. conson.; it occurs bef. *s* and *h* (bef. other consonn. it is often merely a way of writing nasal consonn.).

*l* bes. *r*, is as in other langg., unorigl.; it obviously increases in the course of the development of Sk.

Besides the sound-laws already explained, Sk. has numerous laws for medial sounds, but esp. for termn. (these laws however do not belong here, but rather to Sk. special grammar), through which the conson.-syst. of Sk. became considerably removed from the basis of the origl. lang.

The representation of gutt. by palatals occurs only bef. vowels, and sonant mom. prolonged sounds, not bef. mom. consonn., mute conson.-prolonged-sounds, and in termin. Yet here also

§ 51. occur palatals by no means acc. to fixed sound-laws (e.g. *yu-yóḡ-a* iunxi, bes. *yóḡ-a-s* iunctio), so that it seems that the lang. has availed itself of the change of gutt. into palatals (originally merely physiological), in order to express differences of relation.

### EXAMPLES.

§ 52. Origl. mom. mute unaspirated consonn.

1. Origl. *k*=Sk. *k*, *k̐*, *kh*, *k̐h*, *ç*, *p*.

Sk. *k*=origl. *k*, e.g. in *ka-s* (who), *√kar* (make), *k̐mi-s* (worm), *v̐ka-s* (wolf), st.-formative sf. *-ka*, e.g. *dh̐rmi-ka-s* (right, fr. *dharmá-s*, duty), etc.

Sk. *k̐*=origl. *k*, *k̐a-k̐ára* (feci), *k̐a-* is the relic of the most origl. reduplicated supposed *√kar*; *k̐a* (-que, and), *katvār-as* (quatuor); *√ruk* (shine), *√vak̐* (speak), whence *vák-mi* (I speak), *vák-am* (uocem, speech); *k̐* stands for *k* esp. in *√termn.*, etc.

*Note*.—Bef. mom. sounds and *s* the gutt. remains, e.g. *vák-ti* (he speaks), *vák-ši* (thou speakest, *š* for *s* after *k*, v. § 55, 2), *vag-d̐hi* (speak), *g* for *k* acc. to sound-laws, v. post., etc.

*kh* and *k̐h* occur for origl. *k* after *s*; this *s* more often than not is lost in case of *shh*, in case of *k̐h* always. [For aspirating force of *s*, v. Kuhn, Zeitschr. iii. p. 321 sqq., 426 sqq. Cf. also Ascoli, Zeitschr. xvi. p. 442 sqq.]

Sk. *kh*=origl. *sk*, e.g. *khaṅ́ga-s* (limping), cf. O.H.G. *hinch-an*, *hink-an*, *√hank*, likewise without initial *s*, but Gk. *σκάζω* (limp), *√skay*=Sk. *khaḡ*, f.f. *skag*; *k̐hága-s* (stirrer), cf. Ang.-Sax. *scac-an*, Norse *skak-a* (shake); *khak̐* (spring forth), cf. Slav. *skak-ati* (spring).

*Note*.—Most words in *kh* cannot, or at least not certainly, be reduced to their f.f.

Sk. *k̐h*=origl. *sk*, e.g. *√k̐hid* (split), Zend *çkid*, Lat. *scid*, f.f. *skid*; *khāyá* (cover), cf. Gk. *σκιά*; *gákk̐hāmi*, f.f. *gaskāmi* (the redupln. of *k̐h* to *k̐k̐h* is regularly written so after a short vowel), and in similarly fmd. pres. stt.

*Note.*—Bef. *t*, *th*, *kh* becomes *ś*, e.g. *práś-ṭum* (*t* for *t* after *ś*), § 52. infin.,  $\sqrt{\text{prakh}}$ , f.f. prob. *prask*, with unorigl. *s*; cf. Lat. *prece* (precor), *proc* (procax), Lith. *pras*, Slav. *pros*, Germ. *frāh* (*frāhnan*), Sk. *praç-nā-s* (prayer) for *\*prak-nā-s*; but e.g. *prak-śyāti* fut. with *k* acc. to usual rule.

$\varsigma$ =origl. *k*;  $\sqrt{\varsigma i}$  ( $\varsigma\acute{e}t\bar{e}=\kappa\acute{e}t\bar{a}i$ );  $\varsigma a$  and  $a\varsigma$  (acuere), pres. (*a*) $\varsigma$ -*yāti*,  $\varsigma\bar{a}$ -*tā-s*, *ci-tā-s* (acutus), whence also  $\acute{a}\varsigma$ man- (n.  $\acute{a}\varsigma$ mā, stone);  $\sqrt{\varsigma ru}$  (hear);  $\varsigma$ van-, n.  $\varsigma\bar{v}\bar{a}$  (hound);  $\sqrt{di\varsigma}$  (show);  $\sqrt{da\varsigma}$  (bite);  $\acute{d}\acute{a}\varsigma$ an- (ten), etc.  $\varsigma$  is a favourite sound esp. bef. liq. consonn. and *v*; further in  $\sqrt{\text{termns.}}$ , in place of *k*; it is however not uncommon at the beginning of roots.

In verb stt. *k* remains bef. *s*, though  $\varsigma$  was produced from it in other circumstances, e.g. *á-dik-śat* ( $\acute{e}\text{-}\delta\epsilon\kappa\text{-}\sigma\epsilon$ , after *k*, *ś* stands for *s*, v. post.), so in certain noun stt., e.g. *dik-śú*, loc. pl. fr. st. *diç*- (n. sg. *dik* for *\*dik-s*, gen. *diç-ás*, quarter of the compass), dat. pl. *dig-bhyás* acc. to sound-laws (v. post.) for *\*dik-bhyas*. Other noun. stt. let their  $\varsigma$ , however, interchange with *t*,  $\acute{d}$ , unoriginally. Bef. *t*, *th*,  $\varsigma$  becomes *ś*, which *t*, *th*, then become lingual, e.g.  $\sqrt{dar\varsigma}$  (Gk.  $\delta\epsilon\rho\kappa$ , see), but *drś-tā-s* (past part. pass.) for *\*drç-ta-s*, f.f. *dark-ta-s*.

Sk. *p*=origl. *k* occurs only sporadically. This change fr. *k* to *p* is seen in all Indo-Eur. langg. except Lat. and Erse; e.g.  $\sqrt{pa\bar{k}}$  (cook) for origl. *kak*. Whilst Lat.  $\sqrt{coe}$  preserves both gutt., which evidently arose fr. redupln. of origl.  $\sqrt{ka}$ , Gk. has in  $\pi\epsilon\pi$  permitted labials to arise in both cases, Sk. *paḥ* and Scl. *pek* have only changed the initial, and Lith. *kep* contrariwise the final. This ex. is specially full of information, and points unmistakably to the originality of the *k*, hence the  $\sqrt{\text{fm.}}$  is in these cases *kak*. Further *pánikan-* (five) for *\*kankan*;  $\sqrt{sap}$  (sequi, Vedic) seems to be a bye-fm. of *saḥ* (sequi), f.f. *sak*, so that in this root also two variations fr. origl. *k* are to be seen; st. *ap-* (water) must stand bes. Lat. *aq-ua*, Goth. *ah-va* (river), for origl. *ak-*, Lith. *ùpė* shows likewise the change fr. *k* to *p*, f.f. of *ùpė* is thus *\*ak-yā*, and the root of this word is probably

§ 52. *ak* (be swift). [On the change of *origl. k* to *p*, wh. often does not appear till late in certain words, while in others *k* remains, cf. Beitr. iii. 283 sqq.]

*Note.*—In the words *hrd-*, *hrd-aya-m* (heart), *h*=origl. *k*, clearly through intermed. *kh*; origl. *k* is attested by *cord-is*, *καρδ-ία hārt-ō*, Lith. *szird-is*, Sl. *srūd-ice*. In *√guh* (hide, 3 sg. pres. *gūh-ati*, *gūh-ā*, cairn) *g* is softened fr. *k*, f.f. of root therefore is *kudh*, as Gk. *κεύθ-ω* (hide), Lat. *cus-tos* for *\*cud-tos*, Ang.-Sax. *hyd-an*, prove.

2. Origl. *t*=Sk. *t*, *th*.

Sk. *t*=origl. *t*, e.g. *ta-t* (that), origl. id.; *tv-am* (thou); *√ta*, *tan*, 1 sg. pres. *ta-nōmi* (stretch); *pāt-ati* (3 sg. pres.), *√pat* (fly, fall); *vārt-atē* (3 sg. pres. med), *√vart* (uertere); sf. of past part. pass., e.g. in *yuk-tā-s* (*√yug*, *yug*, iungere), cf. *iunc-tu-s*, *ζευκ-τό-ς*; sf. *ti* of 3 pers. vb., e.g. 3 sg. *bhāra-ti*, 3 pl. *bhāra-nti*, cf. *φέρε-(τ)ι*, *φέρε-ντι*, *fer-t*, *feru-nt*, Goth. *bairi-th*, *baira-nd*, etc.

Sk. *th*=origl. *t*, esp. after *s*, e.g. *√stha* (stand), e.g. *sthi-tās*, origl. *sta-ta-s* (status); *√stha* (cover), cf. Gk. *στεγ*, Lith. *steg*; superl. sf. *-iṣṭha*, e.g. *lāgh-iṣṭha-s*, cf. *ἐλάχιστος* (here *th* has become *ṭh* acc. to sound-laws after *ṣ*). Sometimes *th* stands for *t* without being caused by preceding *s*, thus *tha*, termn. 2 sg. pf., e.g. *babhār-tha* (thou hast borne) could hardly have had an *s* inserted bef. it; as a *√termn.* in *√prath* (be wide, broad), 3 sg. *prāth-atē*, *prth-ūs* (πλατὺς); *√math*, *manth* (move), 1 sg. pres. *math-nāmi*, *mānth-āmi*, where origl. *st* must not be assumed.

*Note 1.*—The unoriginality of *th* is shown by the fact that it does not appear at the beginning of words (except in the few onomatopoeitic or unused and unorigl. words given in Lexx.).

*Note 2.*—It appears that after *k* (in those cases where *t* though part of a sf. was not felt to be such) this *t* passed into *s*; *s* however in these instances becomes *ś* (v. post. § 55, 2), e.g. *śkṣa-s* (bear)=*ἄρκτο-ς*, *ursu-s* for *\*urctus* (cf. post. sub Lat.); st. *tākṣan-* (carpenter)=*τέκτον-*; *√kṣan* (slay) further fm. fr. *kṣa*, cf. *κτεν* in *κτείνω*; *√kṣi* (dwell), Gk. *κτι* (*ἀμφι-κτι-νες*, dwellers-around, *κτι-ζω*, build), etc. Contrariwise, e.g. *uktā-s*



(said), past part. pass.; *vák-ti*, 3 sg. pres.  $\sqrt{vak}$ , origl. *vak* (say, § 52. speak); st. *ṣak-tár-* (fut. part.), *ṣak-tá-* (past part.),  $\sqrt{ṣak}$  (know, be able), etc.

### 3. Origl. *p*=Sk. *p*, *ph*.

Sk. *p*=origl. *p*, e.g.  $\sqrt{pa}$  (drink, protect), whence *pá-ti-s* (lord), *pi-tár-* n.sg. *pi-tā* (father);  $\sqrt{par}$  (fill), 3 sg. pres. *pi-par-ti*, whence *pūr-ṇá-s* for *\*par-na-s* (plenus);  $\sqrt{spaṣ}$  (see, spy) in *spaṣ-a-s* (spy), *vi-spaśtá-s* (perspicuos) for *\*vi-spaṣ-ta-s* (past part. pass.);  $\sqrt{tap}$ , 3 sg. pres. *táp-ati* (heat, burn);  $\sqrt{sarp}$ , 3 sg. pres. *sárp-ati* (serpere, ire), etc.

Sk. *ph*=origl. *p*, esp. after *s*, e.g. *sphaṭī* (alum), *sphātika-s* (crystal), cf. German *spat*;  $\sqrt{sphur}$ , 3 sg. pres. *sphur-āti* (shake, in Vēd. the root means 'strike, push'), clearly fr. *\*sphar*, cf. *σπαίρω*, *ἀ-σπαίρω*, O.H.G. *sporo* (spur), *spor* (track); *phēna-s* (foam), cf. Scl. *pēna*, Lith. *pēna-s* (milk); Lat. *spūma*, provided it comes fr. *\*spoi-ma*, would here also point to *sp*, in *phē-na-s* etc. we must therefore assume a root *spi*, etc. For the rest, *ph* is not frequent in initio.

The aspiration of tenues after *s* is not, however, by any means universal, as is shown by the common combinations *sk* (*skánd-ati*, scandit), *st* (*str-ṇāti*, sternit), *sp* (*sprṣ-āti*, touches).

Origl. mom. sonant unaspl. consonn.

§ 53.

### 1. Origl. *g*=Sk. *g*, *ḡ* (*h*).

Sk. *g*=origl. *g*, e.g.  $\sqrt{ga}$  (go) in *ḡá-gā-ti*, *ḡi-gā-ti*, 3 sg. pres., *ga-tá-s* (past part. pres.), *á-gā-t* (3 sg. aor.); *yugá-m* (iugum); *grabh*, *grah* (seize), etc.

Sk. *ḡ*=origl. *g*, e.g. *ḡi-gā-mi* (*βίβημι*), 1 sg. pres.  $\sqrt{ga}$  (go); *yu-ṇá-ḡ-mi*, 1 sg. pres.  $\sqrt{yug}$  (iungere), cf. parallel *yug-á-m* with *g* preserved;  $\sqrt{ḡan}$  (gignere), e.g. *ḡán-as*=Lat. *gen-us*, 1, 3, sg. ind. pf. *ḡá-ḡán-a*=*γέγονα*, *γέγονε*; *ḡnā-tá-s*=(*g*)*nō-tus*,  $\sqrt{ḡna}$  fr. *ḡan*, origl. *gan*, etc.

*Note.*—Bef. *t* in many cases we find not the gutt. but an unorigl. *ś*, e.g. *srś-tá-s*, past part. pass.  $\sqrt{sarś}$  (do); *mārś-ti*, 3 sg. pres.  $\sqrt{marś}$  (cleanse, wash away). Sometimes also *ḡ* is interchanged with *ḍ* and *ṭ*, acc. to the quality of the following sounds.

§ 53. In more cases in Sk. *h* (=gh) stands where Gk. and the other langg. point to origl. *g*, so that in Sk. we must assume an unorigl. aspiration, e.g. st. *mah-ánt-*, i.e. \**magh-ant-* (big), but parallel to it *maḡ-mán-* (strong), cf. Gk. *μέγ-ας*, *μέγ-ιστος*, Goth. *mik-ils* (big), Lat. *mag-nus*; indeed beside it stands Sk. *√mah*=*magh* (to wax), which exactly corresponds to Goth. *√mag* (can, be able); *hánu-s* (jaw)=Gk. *γένυ-ς*, Goth. *kinnu-s* (chin), cf. Lat. *gena*, and (dens) *genu-inus*; *ahám*, i.e. \**agham*=*ἐργώ*, Goth. *ik*, Lat. *ego*; *gha*, *ha*=Gk. *-γε*, Dôr. *-γα*, Goth. *-k* (in *mi-k*=\**με-γε*). In all these cases Gk. *γ*=Goth. *k* are in favour of origl. *g*.

2. Origl. *d*=Sk. *d*, e.g. *√da* (dare), 3 sg. pres. med. *dá-da-tē*, 2 sg. imper. med. epic *dá-da-sva*, 1 sg. pres. act. *dá-dā-mi*; *√dam* (domare), e.g. *dam-á-s*, *dām-ana-s* (domans, coerces), 3 sg. pres. *dām-yá-ti*; *√vid* (uidere), e.g. 1 sg. pres. *véd-mi*, 1, 3, sg. pf. *véd-a*=*Foīḍa*, *Foīḍe*; *√sad* (sidere, considere), e.g. 3 aor. sg. *á-sad-at*, etc.

Note.—*d* in *pīḍ* (press) and *nīḍá-* seems to have arisen from *sd*, namely in case of *pīḍ*, which is proved unoriginal through *ī* and *d*, comes fr. \**piśd*, \**pi-sad*=*api-sad*, cf. *πίεζω*=\**πι-σεδγω*=\**ἐπι-σεδ-γω*; bes. *nīḍá-s*, *nīḍá-m*, stands Lat. *nīdu-s*, which may very likely be for \**nīśdus* (cf. *iu(s)-dex*, *i(s)dem*; v. sub Lat. 'consonn.'), to which Teutonic *nest* points; \**nīśda-s* would then have arisen from \**nī-sada-s*, and mean "down-sitting," unless it belong to *√nas*, on which point v. Curt. Gr. Et.<sup>2</sup> no. 432, p. 282.

3. Sk. *b* (cf. § 46, 3), which may be held unorigl., occurs, e.g. in *bala-m* (force), with which is usually classed O. Bulg. *bolij* (greater); *√lab*, *lamb* (labi), 3 sg. pres. *lāmb-atē*, Lat. *lab*.

§ 54. Origl. mom. sonant asp. consonn.

1. Origl. *gh*=Sk. *gh*, *h*.

Sk. *gh*=origl. *gh*, e.g. *√agh* in *agh-ám* (ill, sin, origl. prob. anguish); *√stigh*=*στειχ* (step), 3 sg. pres. *stigh-nutē*; *mēgh-á-s* (clouds), cf. *√mih*, sub 'h'=gh; *dīrghá-s* (long)=*δολεχός*-s, etc.

Sk. *h*=origl. *gh*; e.g. *hāsá-s* (goose), cf. *χῆν*, Germ. *gans*, Lith. *žąsis*, Pol. *geś*; *√āh*=*angh* in *āh-ú-s* (snake), *āh-as*, *āh-atīs* (pain); *√rah* (uehere), 3 sg. pres. *váh-ati*, for *vagh*, cf. Goth.

√*vag*; √*mih* (pour out, mingle), 3 sg. pres. *mēh-ati* for *migh*, § 51. cf. supr. *mēghás*, Gk. √*μνχ*; √*lih* (lick), 3 sg. pf. *li-tē-ha*, cf. *λιχ*, etc.

*Note 1.*—In *nakha-s*, *nakha-m* (nail, claw), cf. *δνυχ-ος*, Scl. *nog-ūtī*, Goth. \**nag-l-s*, *kh* stands most strangely where we should have expected *gh*.

*Note 2.*—*gh* occurs rarely, e.g. *ghasá-s* (fish); in other Indo-Europ. langg. no similar example is yet known; *gh* occurs most often in initio in onomatopœtic words.

## 2. Origl. *dh*=Sk. *dh*, *h*.

Sk. *dh*=origl. *dh*, e.g. √*dha* (set), 1 pres. *dā-dhā-mi*, cf. *τι-θη-μι*, Goth. √*da*: √*idh* (kindle), 3 sg. pass. *idh-yátē*, cf. Gk. *αἶθ-ω*; √*rudh* (rubere) in *rudh-irás* (ruber), cf. Gk. *ῥυθ*, Goth. *rud*; *mádhu* (honey, mead, intoxicating drink), cf. *μέθυ*, etc.

Sk. *h*=origl. *dh*, e.g. in *hi-tá-s* for \**dhi-ta-s* fr. \**dha-ta-s*, past part. pass. √*dha* (set), cf. *θε-τό-ς*; √*rah* (*rah-itá*, forsaken, bereaved; *ráh-as*, ntr. secret, hidden) for \**radh*, cf. √*λαθ* (*λαθ-εῖν*, escape notice; *λάθ-ρα*, secretly); √*guh* (hide) for \**gudh*, cf. √*κρυθ* (*κρύθ-ω*, hide); *-hi* for *-dhi*, sf. of 2 sg. imper. act., e.g. *pā-hi* (tuere), but Vēd. *gru-dhi*=*κλυ-θι*; in Sk. this *-dhi* occurs after consonn. only, e.g. *ad-dhi*, √*ad* (edere), but *-hi* after vowels.

## 3. Origl. *bh*=Sk. *bh*, rarely *h*.

Sk. *bh*=origl. *bh*, e.g. √*bhar* (ferre), 1 sg. pres. *bhār-āmi*, cf. Gk. *φέρ*; √*bhu* (become, be), 3 sg. pres. *bhāv-ati*, cf. *φύ*; *bhid* (findere), 3 sg. pf. *bi-bhéd-a*, cf. Lat. √*fid*; *nábhas* (air, heaven), cf. *νέφος*; √*bha*, 3 sg. pres. *bhāt-ti* (gleam), cf. *φα*, *φα-ν*, etc.

Sk. *h*=origl. *bh*, e.g. √*grah*, Vēd. still *grabh* (seize); *mā-hyam* bes. *tú-bhyam* (dat. sg. pers. pron. 1 and 2), cf. *mi-hi* bes. *tí-bi*; *bh* has disappeared entirely in instr. pl. of *a*-st., e.g. *áçvāis* for \**açva-bhis* (v. 'declens.').

In roots which end in aspp. an origl. initial asp. loses the aspiration; e.g. √*bandh* (bind), 3 s.g. pres. *badh-nā-ti*, pf. *bā-bándh-a* for \**bhandh*, Goth. *band*, Gk. *πενθ* for \**φενθ*; *bāhú-s*

§ 54. (masc. elbow) for \**bhāhu-s*, cf. Norse *bögr*, Gr. *πῆχυς* for \**φῆχυς*; *√budh* (learn, know), 3 sg. pres. *budh-yātē*, *bódh-ati*, cf. Goth. *√bud*, Gk. *πυθ* for \**φυθ*; *√druh* (hurt), 3 sg. pres. *druh-yāti* for \**dhrugh*, Zend *drug*, *drug*, *druž*, but O.H.G. *trug*, i.e. earlier *drug*, are in favour of initial *dh*. Cf. the reduplication-law (§ 59, 3).

### CONSONANTAL PROLONGED SOUNDS.

§ 55. Spirants *y*, *s*, *v*.

1. Origl. *y*=Sk. *y*, e.g. pron. *√ya* (rel.), n. sg. masc. *ya-s*; *ya* is further a frequent st.-formative element, e.g. *mádih-ya-s*=*med-in-s*; the same part. fms. the opt., e.g. *s-yā-t*=*s-iē-t*; further, as one part of the pres. stem which comes fr. *as* (esse), and serves to form the fut., e.g. *dā-s-yā-ti*=*δῶσει* fr. \**δω-σ-ye-ti*; *ya* forms derivative vbs., e.g. *bhārá-ya-ti*, 3 sg. pres. vb. causat. *√bhar* (ferre)=*φορεῖ* fr. \**φορε-ye-ti*; *√yu*, *yug* (iungere), cf. Lat. *√iug*, whence *yugá-m*=Lat. *iugu-m*; *yúvan*, acc. sg. *yúvān-am*, cf. Goth. *juggs* (same meaning), Lat. *iuvēnis*: *yákr̥t* (liver), cf. Lat. *iecur* (id.).

The connexion between *y* and *i* is treated in § 14, 1, d; the splitting up of *y* to *iṃ*, *īy*, in § 14, 1, c; change fr. *y* to *iṃ*, *īy*, v. § 15, 2, b.

2. Origl. *s*=Sk. *s*, *ś*.

Sk. *s*=origl. *s*, e.g. *√sad* (sedere), e.g. *sád-as* ntr., *sád-ana-m* (sedes); *sáp-tan-*, Véd. *saptán-*=*septem*; *√su* (beget, sow), e.g. *su-tás*, past part. pass.; *√sru* (flow), 3 sg. pres. *sráv-ati*: *svásar-*, acc. sg. *svásār-am* (sister); *√svid* (sweat), 3 sg. pres. *svid-yāti*; *√star* (sternere), 3 sg. pres. *str-ñāti*; *√smar* (remember), 3 sg. pres. *smár-ati*; *√as* (esse), 3 sg. pres. *ás-ti*; *√vas* (dwell), 3 sg. pres. *vás-ati*; *√vas* (clothe oneself), 3 sg. pres. *vas-tē*; in st.- and word-formative particles, as *mán-as* (ntr. mens)=*μέν-ος*; *-s* is an element of nom. masc. and fem., e.g. *vṛka-s*, pl. *vṛkā-sas* (wolf, wolves), etc.

Sk. *ś*=origl. *s*, e.g. *√uś* (ur-ere), cf. *us-tus*, 3 sg. pres. *ōś-ati*;

√*tarś* (thirst), 3 sg. pres. *trś-yāti*, cf. Lat. *torr-eo*=\**tors-co*, § 55. Germ. *durs-t*; ś also sporadically after *a*, e.g. √*bhāś* (speak), 3 sg. pres. *bhāśatē*, further fmn. of √*bha*=Gk. *φα* in *φά-τι-ς*, *φά-σι-ς* (speech), *φη-μί* (say); bes. *bhās*, 3 sg. pres. *bhāśatē* (shine, gleam), further fmn. of a similarly sounding √*bha*=Gk. *φα* in *φαίνω* (show, make clear)=\**φα-ν-γω*, *φά-σι-ς* (showing); ś thus stands to *s* as palatal to gutt.; it is initial in *śaś* (sex) only, but cf. Zend *khaśvs*, a fm. which renders doubtful the originality of the initial sound of this numeral in the other langg. of our stock.

Origl. *s* has moreover undergone many more changes in Sk.; these changes, however, did not occur generally till a relatively late period; *s* before *t* (*th*) and *p* (*ph*) and after *a* (except in fine) remains fixed; after *k* and *r*, ś stands for *s*; likewise after *i*, *u* (and their diphthongs, generally after other vowels, as after *a*, *ā*); medially bef. most sounds (bef. all vowels and *y*, *r*, *m*, *t*, *th*; ° and ~ bef. *s* do not break this sound-law); fr. st. *bhūti-* (= *भवति*) thus comes loc. pl. *bhūti-śu* for \**bhūti-su*; *nē-śyāti* (3 sg. fut. √*ni*, lead) for \**nai-syati*; *é-śi*, f.f. *ai-si* (2 sg. pres. √*i*, go); *vāk-śi* (2 sg. pres. √*vak*, speak) but *āt-si* for \**ad-si* (2 sg. pres. √*ad*, eat) and *tā-su* (loc. fem. pl. *tu*, pron. dem.); st. *dhānuś-* (bow), loc. pl. *dhānuś-śu* or *dhānuś-śu* for \**dhanus-su*; with sf. *mant*, *dhānuś-mant-*, n. sg. *dhānuś-mān* (provided with a bow). Betw. *s* and ś there is nevertheless great vacillation (particulars must be relegated to Sk. special. gr.; it is enough to note here that ś = origl. *s*).

°, *r*, *ç*, occur, like ś, acc. to definite sound-laws, in place of *s*; yet mainly in termn. alone, in which case *-as* also may pass into *ō*, and *s* be lost, e.g. *vrka°* for *vrka-s* at end of a sentence, or bef. *k*, *p*; *avir ēti* for *avis ēti* (ouis it); *r* occurs for *s* bef. all sonant sounds unless *a* or *ā* precede; *-as*, however, bef. sonants becomes *ō*, and *-ās* becomes *ā*; this latter also medially, e.g. *çā-dhi* for \**çās-dhi*, 2 sg. imper. fr. √*çās* (rule), but 3 sg. imper. *çās-tu*; *aviç karati* (the sheep goes); *vrkō bhavat* for *vrkas abhavat* (the wolf was); *vrka āstē* for *vrkas āstē* (the wolf sits), etc.

§ 55. In stems ending in *-s* these changes take place before case-sff. also which begin with a conson., e.g. st. *mānas-*, g. *mānas-as*, without change; but instr. pl. *mānōbbhis* for \**manas-bhis*, loc. pl. *mānaḡ-su* for *mānas-su*, which also occurs, *dhānūr-bhis* for \**dhanus-bhis*, st. *dhānus-* (bow).

ś bef. *s* passes into *k*, e.g. √*dris* (hate), 2 sg. pres. *drék-ši* for \**drēs-si*; also the change to *ṭ*, *ḍ* occurs, as in the case of *ṣ*, e.g. *drīḍ-dhi*, 2 sg. imper. act. √*drīṣ* for \**drīṣ-dhi*. Cf. Sk. grammars.

Note.—In *ṣvāṣura-s* (father-in-law), *ṣvaṣrū-s* (mother-in-law), *ṣ* stands in initio (by assimiln. to follg. *ṣ*), instead of *s*, cf. Zend *ghaṣura-* i.e. \**svaṣura-*, ἑκυρό-ς, Lat. *socer*, *socrus*; similarly in st. *ṣūṣka-* (dry) for \**suska-*, cf. Z. *huska-*, O.Bulg. *suchū*, f.f. *sausa-s*, Lith. *saūsa-s*; *ṣ* for *s* occurs besides in other single cases bef. *v* and *u*.

3. Origl. *v*=Sk. *v*, e.g. √*vid* (perceive), 3 sg. pres. *vēt-ti* for \**rēd-ti*; √*va* (blow), 3 sg. pres. *vā-ti*, cf. Goth. √*va*; √*vah* (uehere), 3 s.g. pres. *vāh-ati*, cf. Lat. *ueh*, Goth. *vag*, Slav. *vez*, etc.; √*var* (cover), 3 sg. pres. *vr-ṇōti*, whence *ūr-nā* (wool) for \**var-nā*, cf. Gk. *Fép-iov*, Slav. *vlū-na*, O.H.G. *wol-la*, etc.; √*var* (will), cf. Lat. *uol* (uelle), Goth. *val* (will), etc.; *ṛi-s*=Lat. *oui-s*, ὄφι-ς; *nāra-s*=Lat. *nouo-s*, νέφο-ς, etc.

On the connexion betw. *v* and *u*, v. § 14, 1, c, d.

§ 56. Nasals.

1. Origl. *n*=Sk. *n*, e.g. *na*, *an-* (negation); √*naṣ* (perish), 3 sg. pres. *nāṣyati*, cf. *vek*; st. *nar-*, *nara-*, n. sg. *nā* for \**nars*, *nara-s* (ἀ-νήρ); *nāu-s*=*vaṭs*; *nā-man-*=Lat. *nō-men-*; *dānta-s* (dens); often *n* is changed into another nasal, e.g. *pūr-nā-s* (plenus, cf. supr. *ū=a*, § 8), f.f. *par-na-s*, *n* for *n*, since *r* precedes, v. post.; *ghā-tās*=*gnō-tus*, origl. fm. of √*gha* is *gan*, on *n* for *n*, v. post.; *yuhgānti* (iungunt), √*yug*, with inserted nasal, but *yuhktē*, 3 sg. med. with *n*, since *k* follows, v. post.; *hump-āti*=*rumpit*, has nasal *m* because *p* follows; *hāsā-s*, cf. *hanser*, Germ. *gans*; *mā-si*, 2 sg. pres. act., *mā-syātē*, 3 sg. fut. med. √*man* (mean), with *~* for *n* acc. to Sk. sound-laws, etc. All these changes must have been wanting in Indo-Eur. origl. lang.,

because clearly either the nasal was not yet within the root, but § 56. stood after it, acc. to the formative principles of Indo-Eur. (v. Introduction, 2), and so the fms. in question were still perh. *yug-nanti*, *yug-natai*, or else *n* and *m* remained unchanged, e.g. *man-si*, etc.

Bef. case-termns. which begin with consonn., *n* as a noun-st.-termn. disappears, e.g. st. *nāman-* (nomen), loc. pl. *nāma-su* for \**nāman-su* (\**nāmā-su*). This sort of loss of *n* takes place in other like cases also.

2. Origl. *m*=Sk. *m*, e.g.  $\sqrt{\text{man}}$  (mean, think), whence *mān-as* (mens)= $\mu\acute{\epsilon}\nu\text{-}\sigma\varsigma$ ; *mā-tār-*=*mā-ter-*;  $\sqrt{\text{smar}}$  (remember), cf. Lat. *me-mor* with lost *s*;  $\sqrt{\text{vam}}$ , Lat. *uom-ere*, 3 sg. pres. *vām-ati*; in st.- and word-formative particles thus sf. *man*, e.g. *nā-man-*; *m* as sign of acc. case, e.g. *āgra-m*=*equo-m*; -*mi*, -*masi*, -*mas*, 1 sg. pl. e.g. *ē-mi*, pl. *i-mās*, earlier *i-māsi*= $\epsilon\acute{\iota}\mu\iota$ ,  $\acute{\iota}\mu\epsilon\nu$ , etc.

The nasals *n*, *m* have, as the above exx. show, undergone many variations in Sk. because they always adapt themselves to the quality of the succeeding consonn. Accordingly bef. gutt. mom. *ṇ* only is found; bef. palatals is found *ṇi*, this sound occurs also immediately after *k*, *g*; bef. lingg. and (acc. to distinct sound-laws) where ling. sounds *ś*, *r*, precede in a word, *ṇ* is found; *n* has its place bef. dentt. and vowels; *m* bef. labb. and vowels (these two origl. nasals only are found in the beginning of a word); bef. *s* and *h*, *ṁ* is found. Particulars belong to Sk. special-gr.

*r*- and *l*-sounds.

§ 57.

*r* was softened to *l* in many cases at an early date; sometimes the earlier lang. retains *r* where the later already has *l*.

Sk. *r*=origl. *r*, e.g.  $\sqrt{\text{ram}}$ , 3 sg. pres. *rāmatē* (he is pleased);  $\sqrt{\text{rik}}$  (separate), 3 sg. pres. *ri-ṇā-k-ti* (with inserted *na*);  $\sqrt{\text{ruk}}$  (shine), 3 sg. pres. *rōk-atē*;  $\sqrt{\text{mar}}$  (mori), e.g. *mr-tā-s*, past part. pass. (mortuos);  $\sqrt{\text{par}}$  (fill), 3 sg. pres. *pī-par-ti*; st.  $\sqrt{\text{krp-}}$  (fem. appearance, beauty),  $\sqrt{\text{karp}}$ , cf. *corp-us*, Z. *keref-s*; in sff., e.g. *rudh-i-rā-s*= $\epsilon\acute{\nu}\rho\theta\text{-}\rho\acute{o}\varsigma$ ; sf. *tar*, Lat. *tor*; *tra-m*, Lat. *tru-m*, etc.

§ 57. *Note*.—In termn. *r* was treated like *s*; at the end of a sentence it becomes %, etc., cf. § 55, 2.

Sk. *l*=original *r*, e.g. *lōk*, 3 sg. pres. *lōk-atē* (see), doubtless akin to *ruk* (shine), cf. *λευκ-ός* and *λεύσσω* = \**λευκ-ω*; *√lup* (break), 3 sg. pres. *lumpāti*, cf. Lat. *√rup*; *√kalp* (be in order), 3 sg. pres. *kālpatē*, cf. *kṛp*; *√lih*, *λιχ*, Lat. *lig*, Erse *lig*, Goth. *lig*, Lith. *liz*, Scl. *liz* (lick), but in earliest Indian still *rih*. Also where the kindred langg. show no *r*, we must yet assume an origl. *r*, because we notice that *l* is continually spreading, whilst *r* becomes rarer; if we suppose this process to have been going on continuously in pre-historic times, *r* will remain as the older by elimination; cf. Zend. Such instances are found in e.g. *plu* (float), Lat. *plu*, Gk. *πλυ*, Scl., Lith. *plu*, Germ. *flu* (in *flu-ζ*, in diall. *fleu-e* (wash); here precisely it happens that *l*—so frequently interchanged with *r*—occurs throughout; whilst in Sk. there is still a root *pru* (go) in existence, which origly. was prob. identical with *plu*, and must be considered as its earlier fm.

§ 58. Sketch of some sound-laws important for comparative grammar (so far as they are not contained in foregoing sections).

Between the various ways in which the Indo-Eur. sounds make their appearance in particular Indo-Eur. langg. (i.e. those changes of origl. sounds through which this or that distinct lang. arose from their common fundamental lang., e.g. Sk. *vāk-am*, Gk. *Φόπ-α*, Lat. *uōc-em*, fr. f.f. *vāk-am*), and the variations which the sounds undergo during the separate existence of the lang. thus produced, namely sound-laws, we can draw no sharp line of demarcation. The distinction between sound-representation and sound-law is chronological, and therefore indeterminate, and the exact definition of the date at which a sound-change occurred is generally difficult. For this reason, and also in order not to break up the subject too much, I have often above left the boundary between sound-correspondence



and sound-law ill-defined; moreover, sound-laws—as peculiar to § 53. the separate-life of a lang.—belong here only in so far as they bear upon our knowledge of older word-forms. The numerous laws, e.g. in Sk., which come into play only when words are composed into sentences, may here be mostly omitted, since we are treating of words taken separately.

We find, esp. in written lang., forms of different periods beside each other, e.g. Sk. *yuk-tá-s* for \**yug-ta-s*, √*yug* (iungere), after an earlier mode of formn. than *iṣ-tá-s* for \**ig-ta-s*, \**ik-ta-s*, f.f. *yag-ta-s*, √*yag* (open, v. § 53, 1, n.); here the sound-law by which *ḡt* becomes *st* is clearly later than the preservation of the origl. combination *gt*, i.e. *kt* (bef. *t*, *k* must naturally occur for *g*).

Generally speaking we may call the Sk. very rich in conson. sound-laws; its conson. system is thus manifoldly unorigl. from this point of view also. Consonn. often exercise influence on one another, not only in the middle of words, but also between the end of one word and the beginning of another when they are combined in a sentence, a process which we can scarcely attribute to the lang. at this early condition; the laying-down of these laws belongs, as we have said, in a great measure elsewhere.

### MEDIAL SOUND-LAWS.

#### 1. Assimilation.

§ 59.

a. Medially also sometimes occurs complete assimilation of a preceding to a follg. sound, e.g. *bhinna-* for \**bhid-na-*, past part. pass. √*bhid* (split); *panna-* for \**pad-na-*, likewise fr. √*pad* (go, fall), and so often in similar cases.

b. Lightening of conson.-groups by loss of one sound is likewise not rare, e.g. *kaśtē* for \**kaś-tē* (*t* for *t* on acct. of ś, v. sqq.), 3 sg. pres. med. √*kaś* (see), etc.; *á-tuṭ-ta*, 3 sg. med. aor. compos. √*tud* (push) for \**a-tuṭ-s-ta*, and so frequently in case of *s* betw. two mom. consonn. in like cases.

c. Bef. sonant mom. sounds sonants only, bef. mutes mutes

§ 59. only, are found, e.g. st. *vāk* (voice), instr. pl. *vāg-bhis*; *yu-nā-g-mi*, 1 sg. pres.  $\sqrt{yug}$  (iungere), but 2 sg. *yu-nā-k-ši*, 3 sg. *yu-nā-k-ti* for *\*yug-ag-si*, *\*yunag-ti* (cf. § 53, 1); *ad-mi*, 1 sg. pres.  $\sqrt{ad}$  (edere), but *āt-si*, 2 sg. pres. *āt-ti*, 3 sg. pres. for *\*ad-si*, *\*ad-ti*; *bhārad-bhis*, instr. pl. fr. st. *bhārant-* (ferens) for *\*bharat-bhis* fr. *\*bharant-bhis*, etc.

The influence of spirant *s* on follg. mom. sounds has been already handled under 's.' In the case of the combination of *ś* with a follg. *t*, *th*, the latter becomes assimild. to *s* because it is a lingual, e.g. superl. sf. origl. *is-ta*; fr. *yans*, compar. sf. shortened *is+ta*, arises next *\*is-tha* (§ 51, sqq.), and since after vowels other than *a*, *ā*, *ś* must occur for *s*, *\*iś-tha*, whereby also *th* becomes *ṭh*, so that in Sk. *iśṭha* stands for *ista*, e.g. st. *āṣ-iśṭha*=Z. *āṣ-ista*, Gk. *ᾠκ-ιστο-*, origl. *āk-ista-* (fr. *āṣú-*, origl. *āku-*, swift). For the group *ṣt* occurs *śṭ*, e.g. st. *drṣṭā-* for *\*drṣ-ta-*, past part. pass.  $\sqrt{darṣ}$ , origl. *darṣ* (see); st. *aṣṭa-*, *aṣṭan-* (eight), for *\*aṣta-*, *\*aṣtan-*, f.f. *akta-* (cf. *ὀκτώ*, octo); *vāṣṭi* for *\*vaṣ-ti*, 3 sg. pres.  $\sqrt{vaṣ}$  (will, wish).

For the changes of *s* produced by assimiln. v. § 55, 2; by nasals, § 56, 2.

An example of dissimilation worth notice is found in the change of *s* to *t* at the end of a root bef. the termn. in *s* of fut. and aor., e.g.  $\sqrt{ras}$  (dwell), 3 sg. fut. *rat-syāti*, 3 sg. aor. *á-rāt-sīt* for *\*ras-syati*, *\*á-rās-sīt*. Doubled *s* was generally avoided, e.g. *ási*, 2 sg. pres.  $\sqrt{as}$  (esse), for *as-si*=*έσ-σέ*, cf. § 55, 2.

Note.—The *s* of  $\sqrt{ras}$  (dwell) is origl. and perh. not due to *t*, cf. Goth.  $\sqrt{ras}$  (remain, be), pres. *ris-a*=*ras-āmi*.

2. The aspirates stand bef. vowels and son. prolonged consonn. only, and therefore never in termn. The collision of a sonant gutt., dent., or lab. aspirate with follg. *t* (*th*) is common. In this case the aspp. throw their aspiration on follg. *t*, which in its turn becomes like the preceding sound in that it assumes vocal-sound; fr. sonant aspp.+*t* arise therefore son. unasp. consonn.+*dh*;

accordingly  $gh+t=g\dot{d}h$ ;  $dh+t=d\dot{d}h$ ;  $bh+t=b\dot{d}h$ , e.g.  $\sqrt{budh}$  § 59. (learn, know), step-formed  $b\dot{o}dh+tum$  (inf. termn.)= $b\dot{o}d\dot{d}hum$ ;  $\sqrt{labh}$  (hold)+ $tum=l\dot{a}bdhum$ , etc.:  $h$  here also often is clearly equivalent in force to  $gh$  (cf. § 54, 1), e.g.  $\sqrt{duh}$  (milk)+ $ta$ , sf. past part. pass., composes the fm.  $dugh\dot{d}\acute{a}-s$ , further  $dug-dhi$  (2 sg. imper.) for  $*dugh-dhi$ ,  $d\acute{o}g-dhi$  for  $*d\acute{o}gh-ti$ , 3 sg. pres., collectively formed as sounds from still existing  $\sqrt{dugh}$ . Other roots (whose initial is not  $d$ ) also treat their  $h$  otherwise, e.g.  $ruh$  (increase)+ $ta$  (pf. part. pass.) fms.  $r\ddot{u}dh\acute{a}-$ ;  $*l\acute{e}h-ti$ ,  $*l\acute{e}gh-ti$ , 3 sg. pres.  $\sqrt{lih}$ , i.e.  $ligh$  (lick), become  $\acute{l}\acute{e}dhi$ , etc.;  $h+t$ ,  $th$ ,  $dh$ , here becomes  $\dot{d}h$ , accompanied by lengthening of preceding short vowel: this sound-interchange is accordingly clearly more secondary and later than the change of  $ht$ , i.e.  $gh$ , into  $gdh$ . The aspiration is thus throughout postponed to the follg. consonant.

When the aspiration of a root-termn. cannot remain, e.g. in termn. or bef.  $s$ , and the root begins with an origl. sonant un-aspd. conson., the aspn. passes over to the latter, e.g. st.  $sarva-b\ddot{u}dh-$  (all-knowing), n. sg. should be  $*sarva-budh-s$ ,  $s$  is necessarily lost, acc. to termination-laws,  $dh$  became  $t$ , the aspn. passes over to the  $b$ , and the word is  $sarva-bh\ddot{u}t$ ; precisely so the loc. pl.  $sarva-bh\ddot{u}t-su$  fr.  $*-budh-su$ ;  $h$  here too was treated like  $gh$ , e.g. 3 sg. aor.  $\sqrt{duh}$  (milk) is  $\acute{a}-dhuk-\acute{s}at$ , with  $\acute{s}$  for  $s$  acc. to rule (§ 55, 2), for  $*a-dugh-sat$ ; likewise where the final aspn. disappears through loss (assimiln.), e.g.  $dh\acute{e}hi$  (2 sg. imper. act.) for  $*dh\acute{a}hi$  (§ 15, e), and this for  $*d\acute{a}-hi$  fr.  $*dadh-hi$ ,  $*dadh-dhi$ ;  $dadh-$  for  $da-dha-$  is pres. st. of  $\sqrt{dha}$  (set),  $hi$ ,  $dhi$ , termn. of 2 sg. imper. act.

3. Law of reduplication. In redupln. the gutt. are changed into palatals:  $k\acute{a}-k\acute{a}ra$ , pf.  $\sqrt{kar}$  (make); of more than one conson. or consonantal double-sounds (aspp.;  $h=gh$ ) only the first was maintained;  $d\acute{a}-dh\acute{a}-mi$ , pres.  $\sqrt{dha}$  (set, lay);  $\acute{g}u-h\acute{o}-mi$ ,  $\sqrt{hu}$  (open; cf. also § 54, 3, sub. fin.);  $\acute{s}u-\acute{s}r\acute{a}v-a$ , pf.  $\sqrt{śru}$  (hear); only in case of  $s+$ mom. sounds does the second

§ 59. of these sounds remain; *tī-ṣṭha-tī*, pres.  $\sqrt{stha}$  (stand), origl. fm. of pres. is *sta-sta-tī*.

In other cases the Sk. still shows a more archaic kind of redupln. by which gutt. and aspp. remain unchanged; so esp. in ancient intensive-sts., e.g. *kō-ku* (3 sg. med. *kō-kū-ya-tē*),  $\sqrt{ku}$  (raise a cry); *kari-kar-*,  $\sqrt{kar}$  (make); *bhari-bhar-*,  $\sqrt{bhar}$  (bear); *ghani-ghan-*,  $\sqrt{ghan}$ , *han* (slay, kill); in noun-sts., e.g. *ghar-ghara-s* (clatter, crackling), etc. (cf. Benf. G. g. 1864, st. 39, p. 1539 sqq.).

### TERMINATION.

§ 60. 1. In termn. only one conson. is tolerated, of more than one only the first remains, e.g. st. *vāk* (voice, acc. *vāk-am*) should be in n. sg. *\*vāk-s*, or rather (acc. to § 52, 1) *\*vāk-s*, or (acc. to § 55, 2) *vāk-ś*, wherefore *vāk* is now seen. Since aspp. are double-sounds, they must lose their aspn.; thus we find, not *\*sarva-budh*, but *\*sarva-bhud*, with aspn. transferred (acc. to § 59, 2), for which, acc. to the follg. law (no. 2), *sarva-bhūt* with *t* for *d* occurs.

Only *r* + mom. conson. can stand *in fine*, a case which nevertheless occurs but seldom; moreover bef. follg. *k*, *t*, *ṭ*, and *kh*, *th*, *ṭh*, the combn. *~s* stands with their representatives, e.g. *āçvān*, acc. pl. of n. sg. *āçva-s* (equos), f.f. is *\*āçvāns* or *\*āçvāms*, hence e.g. *āçvās tatra* (equos ibi); *çrī-mān* (pleasant), n. sg. masc. f.f. *\*çrī-mant-s*, hence e.g. yet *çrīmāñ karati* (felix it; *ç* for *s* acc. to § 55, 2); *āsan*, 3 pl. impl.  $\sqrt{as}$  (esse) fr. *\*āsant*, *\*āsans*, *t* is esp. often subject to a change into *s*, as in stems in *-ant*, which are interchanged with fms. in *-ans*, further in termn. of 3 pl. *-us* for *-ant*, hence e.g. *āsās tatra* (erant ibi) for origl. *\*āsant tatra*. In all other cases, however, *n* only remains acc. to the general rule.

2. As only mute mom. consonn. (when no distinctly influencing clearer sound follows upon it; in pausa) could stand *in fine*, the son. consonn. pass over into the mutes of their quality; hence

for *\*sarva-būdh*, not *\*sarva-b<sup>h</sup>ud*, but *sarva-bhūt* is found. *h*, § 60. i.e. *gh*, becomes *t* in termn., earlier *k* (for *g*, *gh*) has been retained in such roots only as begin with *d*, e.g. fr. *lih* (licking) comes in nom. (f.f. *ligh-s*) *lit* (*lid* bef. sonants), but fr. *duh* (milking), *dhuk* (*dhug*).

*Note.*—That palatals are not retained in termn. was remarked above in § 51, sub. fin.

## CONSONANTS OF GREEK.

§ 61.

## v. Table in § 16.

The consonl. system of the Gk. has retained 1. the origl. aspirates, not, however, as sonants, but as mutes:  $\chi = kh$ ,  $\theta = th$ ,  $\phi = ph$ , these can be proved to be the oldest equivalents of the Gk. sounds; the pronunciation of  $\chi$ ,  $\phi$ , as spirants, i.e.  $\chi =$  Germ. *ch*,  $\phi = f$ , and that of  $\theta$  as a sibilant (nearly like *ts*), is of later origin, and arose first partially and afterwards in all cases. The passing of origl. sonant aspp. into Gk. mute aspirates is not inexplicable according to the physiology of sounds. Arendt (Kuhn und Schleicher, Beitr. ii. 283) conjectures, prob. rightly, that the un-sonant *h* of the origl. aspp. *gh*, *dh*, *bh*, changed the preceding sonants *g*, *d*, *b*, into the mutes  $\kappa$ ,  $\tau$ ,  $\pi$ , and indeed no one will deny that *kh*, *th*, *ph*, are much easier to pronounce than *gh*, *dh*, *bh*. Thus the Gk. already permits of an assimilation. Change of sonn. to un-sonn. is seen also in Teutonic (origl. *g*, *d* = Germ. *k*, *t*). The agreement of the Indo-Eur. langg. collectively, and also of those langg. which are nearest of kin to the Gk., prevents us from accepting the supposition that the Gk. alone has preserved the oldest equivalents for the Indo-Eur. aspirates (that the sounds *kh*, *th*, *ph*, existed in the origl. lang. instead of *gh*, *dh*, *bh*; cf. esp. G. Curtius, Gr. Etym.<sup>2</sup> p. 369 sqq.). 2. Gk. shows a dislike of the origl. spirants; *y* even, in the earliest accessible state of the lang., is found merely remaining in its effects, but lost as a separately existing sound; *v* is retained

§ 61. as *F* in the archaic lang.; *s* stands its ground only in terminations and bef. and after mutes ( $\xi, \psi$ ); moreover, when another sound has assimilated itself to it (*s*); before vowels it becomes *h*, and generally falls out between vowels. In Gk. as in all other Indo-Eur. langg., except Zend, *l* already occurs often beside *r*.

Generally, therefore, the consonantal-system of the Gk. is nearer to that of the origl. lang. than that of the Sk. or of most other Indo-Eur. langg.

As for consonl. sound-laws, the loss of origl. spirants and the variations which arise through this loss, and through the effects of origl. spirants on neighbouring sounds, bring about a considerable deviation from the older system of sounds. Assimilation has already acquired a widely extended sway: dentals generally have fallen away before *s*, *n*, mostly with a lengthening of preceding vowel. The palatal sounds (*y, i*) already show their influence in many cases (*zêtakismos*). Further, but few consonn. are tolerated in termn.; in short, in its consonantal sound-laws Gk. much resembles a lang. which is already in a comparatively late stage of existence.

§ 62.

#### EXAMPLES.

Origl. momentary mute unaspirated consonants.

1. Origl. *k*=Gk.  $\kappa, \gamma, \pi, \tau$  ( $\kappa\gamma=\sigma\sigma$ , cf. sound-laws).

Gk.  $\kappa$ =origl. *k*, e.g. *καρδ-ία* (heart), cf. Lat. *cord-*, Lith. *szird-īs*, Sl. *srūd-ice*, Goth. *hairt-ō*, Indo-Eur. lang. collectively presuppose an initial  $\kappa$ , Sk. *hrd-* thus stands for *\*khard-*, origl. *hard-*; *κεῖ-μαι* (I lie), *κοί-τη* (bed),  $\sqrt{\kappa\iota}$ , Sk. *çi*, Sl. and origl. *ki*; *κύων, κυν-ός* (hound), Sk. st. *çvan-*, origl. *kvan-*; *κλυ-τός* (famed),  $\sqrt{\kappa\lambda\upsilon}$  (hear), Sk. *çru*, Goth. *hlu*, origl. *kru*; *δάκ-νω* (bite),  $\sqrt{\delta\alpha\kappa}$ , Sk. *daç*, origl. *dak*; *δείκ-νυμι* (show),  $\sqrt{\delta\iota\kappa}$ , Sk. *diç*, Goth. *tih*, origl. *dik*; *δέκα* (ten), Lat. *decem*, Sk. *daçan-*, Goth. *taihun*, origl. *dakan-*; *λευκ-ός* (white), *ἀμφι-λύκ-η* (morn-ing-twilight),  $\sqrt{\lambda\upsilon\kappa}$ , Sk. *ruk*, origl. *ruk*, etc.

*Note.*—ξ is merely a character for *ks*, e.g. δείξω (I will show) § 32. = \*δείκ-σω; δεξιός (right) = \*δεκ-σιος, \*δεκ-τιος, cf. *dexter*, Sk. *dākṣ-īnas*, etc.

Gk. γ is sometimes a later softening fr. κ, which often remains beside it (cf. G. Curtius, Gr. Et.<sup>2</sup> 467 sqq., 600 sqq.), e.g. √φραγ in ἐ-φράγ-ην bes. pres. φράσσω (fence in) = \*φρακ-γω (v. sound-laws), Lat. *farc-io* (on the difference of meaning v. G. Curt. Zeitschr. xiii. 399); √μαγ in ἐ-μάγ-ην, μάγ-ειρος (cook), μαγ-εύς (pastry-cook), but μάσσω (knead) = \*μακ-γω, cf. *mac-erare*, Lith. *mānk-yti* (knead) bes. *manh-sztýti* (soften), root therefore *manh* fr. *mak*; μίσγω, μίγνυμι (mingle), bes. Lat. *misceo*, Sk. *miṣṛáṁi*; √πλαγ in πλαγ-ή (blow), ἐξ-ε-πλάγ-ην bes. πλήσσω (strike), i.e. \*πληκ-γω, cf. Lith. *plāk-ti* (strike), pres. *plak-ù*, f.f. *plak-āmi*, etc. (cf. Lat. post).

Gk. π = origl. *k* (cf. G. Curt. in Kuhn's Zeitschr. iii. 401 sqq.), e.g. √πεπ (cook) in πέ-πεπ-ται, πέψω, i.e. πέπ-σω, πέπ-ων (ripe), bes. πεκ in πέσσω (cook) = \*πεκ-γω, origl. *kak*, Lat. *coc*; πέντε (five), Aiol. πέμπτε, πέμπ-το-ς (fifth), πεμπ-άζειν (count by fives), Lat. *quinque*, origl. *kaukan*; √πο in ποῦ (where), πῶς (how), πότερος (whether, uter), Ión. still κοῦ, κῶς, κότερος, Lat. *quo-*, Goth. *hva-*, Sk. Lith. Slav. and origl. *ka-*; √έπ in ἑπ-ομαι (follow), origl. *sak*, Lat. *seq*; √φεπ in φέπος (word), εἶπον (I said) = \*FeFeπον, \*Φοπ-ς (voice) = *uōc-s*, origl. *vak* (speak), in ὄσσα (voice) = \*Φοκγα (v. sound-laws), *k* has remained; √λιπ in λείπ-ω (leave), λοιπ-ός (left over) = Lat. *lic* (linquo), Sk. *rik*, origl. *rik*; √όπ in ὄφομαι (I shall see), ὄμμα (eye), Aiol. ὀπ-πα = \*οπ-μα, Lat. *oc* in *oc-ulus*, Lith. *ak-īs* (eye), etc., but dual ὄσσε = \*οκγε, fr. a st. \*ὀκι- (eye), Lith. and origl. *aki-* with *k* retained. Acc. to G. Curt. Gk. π is in 17 cases = origl. *k*, whilst in 104 cases it remains *k*, thus about one-sixth of origl. *k* has been changed to π.

Gk. τ = origl. *k* occurs mostly in pronl. and num. stems, thus τί-ς (who), Lat. *qui-s*, Sk. \**ki-s* (in *na-kis*, no one, *mā-kis*, O.Bulg. *mā-kis*, ne quis), origl. *ki-s*; τε (and), origl. *ka*, Sk. *-ka*, Lat.

§ 62. *-que*, Goth. *-u-h* for *\*-ha*, cf. *πό-τε* (when), Dôr. *πό-κα*, ἄλλο-τε (another time), Dôr. ἄλλο-κα; *πέντε* (five) bes. Aiol. *πέμπε* (see ab.  $\pi=k$ ), origl. *kankan*, cf. *quinque*; *τέσσαρες* (four), origl. *katvāras*, cf. Lat. *quatuor(es)*, Sk. *ῥατεῖρ-as*, Lith. *ketur̃*. This correspondence of sounds occurs but rarely in other roots, e.g.  $\sqrt{\tau}$  in *τί-ω* (honour, value), *τί-μή* (honour), *τί-νω*, *τί-νυμι* (punish, fine), Sk. *ῥi* in *ῥάγ-ῃ* (I punish), *ἀπα-ῥι-τα-s* (honoured), origl. therefore *ki*.

2. Origl.  $t=Gk. \tau$  ( $\tau\gamma=\sigma\sigma$ , v. sound-laws), e.g. *τό(τ)* origl. and Sk. *ta-t* (nom. acc. sing. dem. pron. st. origl. *ta-*);  $\sqrt{ta}$ , *τεν* in *τέ-τα-κα*, *τά-νυ-μαι* (stretch myself), *τείνω* (stretch, lengthen) = *\*τεν-γω*, origl. and Sk. *ta*, *tān*; st. *τρι-* (three) in *τρεῖς*, origl. and Sk. *tri-*;  $\sqrt{sta}$  (stand), in *στα-τός* (placed), *στά-σις* (setting, revolt), *ῥι-στη-μι* (set up), origl. and Lat. *sta*, etc.;  $\sqrt{stey}$  in *στέγ-ος* (roof), *στέγ-ω* (cover), cf. Lith.  $\sqrt{steg}$ , origl. *stag*;  $\sqrt{pet}$  in *πέτ-ομαι* (fly), *πί-π(ε)τ-ω* (fall), origl. and Sk.  $\sqrt{pat}$  (fly, fall); *πλατύς* (broad), origl. *pratus*, Sk. *prthús*; suff. *το* of pf. pass. part., origl. and Sk. *ta*, etc.

The combination *κτ* is in most cases preserved only in Gk., while in other langg. it is softened to *ks*, e.g. st. *τέκτον-* (carpenter), Sk. *tákṣan-*, cf. O.H.G *dēhsa*, *dēhsala* (axe); *ἄρκτος* (bear) = Lat. *ursus*, by Lat. sound-laws for *\*urcsus* fr. *\*urctus*, Sk. *ῥkṣas*, f.f. *\*ark-ta-s*.

*Note.*—Upon the very uncommon softening of  $\tau$  to  $\delta$  in Gk. cf. G. Curt. Gr. Et.<sup>2</sup> p. 469 sqq. It occurs almost without exception in obscure etymologies, not in words accurately corresponding with their kindred langg.

3. Origl.  $p=Gk. \pi$  (cf.  $\pi=$ origl. *k*), e.g.  $\sqrt{po}$ , *πι* (drink), in *πό-σις* (draught), *πέ-πο-μαι*, *πέ-πω-κα*, *πί-νω* (drink); *πό-σις* (husband), f.f. and Sk. *pá-tis* (lord); st. *πα-τέρ-* (father), origl. *pa-tar-*, fr.  $\sqrt{pa}$  (protect);  $\sqrt{pla}$ , e.g. in *πίμ-πλη-μι*, *πιμ-πλά-ναι* (fill), origl. *pra* fr. *par*, e.g. Sk. *pī-par-mi* (1 sing. pres. act.); *πλατύς* (broad), origl. *pratus*, Sk. *prthús*;  $\sqrt{plu}$  in *πλέF-ω* (sail), *πλόF-ος* (voyage), *πλυ-τός* (washed), Sk. *plu*, origl. *pru*;



✓έρπ in έρπ-ετόν (creeping-thing), έρπ-ω (creep)=Sk. and § 62. origl. *sárp-āmi*, Lat. *serp-o*, origl. *sarp*; ύπ-νος (sleep), origl. and Sk. *sváp-nas*, cf. *som-nus*=\**sop-nus*, etc.

*Note 1.*—The softening of π to β, likewise uncommon, and only found in words of obscure etymology, has been treated of by G. Curt. elsewh. p. 471 sqq.

*Note 2.*—On unoriginal aspiration of *stenuas* caused by operation of sound-laws, v. 'sound-laws.' Sometimes in Gk. as in Sk. aspirates make their appearance without visible reason. This occurs comparatively frequently in the case of π, cf. *ἀ-λείφ-ω* (anoint), *ἀ-λοιφ-ή* (ointment), bes. *λίπ-α*, *λίπ-ος* (grease), *λιπ-αρός* (greasy, shiny), cf. Sk. ✓*lip* (anoint), O.Bulg. *lěp-ŭ* (plaster), Lith. *lįp-ti* (cleave to); *βλέφ-αρον* (eyelid) bes. *βλέπ-ω* (glance); *κεφ-αλή* (head) bes. Lat. *cap-ut*, Sk. *kap-ālas*, *kap-ālam* (shell, skull); *σαφ-ής* (clear), *σοφ-ός* (sap-iens), cf. Lat. *sap-iō* (smack, am wise), O.H.G. ✓*sab* (understand; in pf. *int-suab*, \**ant-suob*, he understands, notices), etc. Moreover, *μόθ-ος* (bustle) must not be coupled with Sk. ✓*math*, *manth* (i.e. *mat*, *mant*, stir, move), and O.Bulg. *mět-a* (trouble), *mět-ež* (uproar, tumult). In *ἐ-τυχ-ον* (I chanced), *τυχ-ή* (chance), *τεύχ-ειν* (prepare), and *Ιόν. τε-τύκ-οντο* (they prepared), *τύκ-ος* (mason's tool), we cannot suppose different roots; so too *δέχ-ομαι* (receive) bes. *Ιόν. δέκ-ομαι*, *δοκ-ός* (beam), *δοκ-άνη* (fork) has the look of an unorigl. asp. In the perf. this unorigl. asp. has developed into a kind of medium for stem-formation, v. sub. Perf. G. Curt. Gr. Et.<sup>2</sup> p. 439 sqq. has treated at length of Unorigl. Aspiration in Gk.

Momentary sonant unaspirated consonants.

§ 63.

1. Origl. *g*=Gk. γ, β.

Gk. γ=origl. *g* (on ζ=γγ, v. sound-laws), e.g. ✓*γεν* in *γέν-ος* (race), *γί-γ(ε)ν-ομαι* (I am born, become), Sk. *gān*, origl. *gan*; ✓*γνο*=*gna* fr. *gan* in *γι-γνώ-σκω* (I learn), *γνώ-μη* (thought, opinion); *γόνυ* (knee)=Sk. *gānu*, cf. Lat. *genu*, Goth. *kniu*; ✓*ζυγ*, origl. *yug* (iungere) in *ζεύγ-υμι* (I yoke), *ζυγ-όν* (yoke); ✓*ἀγ* in *ἀγ-ω* (lead)=Sk. *ág-āmi*, Lat. *ag-o*, O.Norse inf. *ak-a*, 1 sing. pres. *ek*, pf. *ök*, etc.

*Note 1.*—It is only in quite detached cases that Gk. δ seems=origl. *g* (like τ=origl. *k*); thus prob. *δελφ-ύς* (uterus) must be

§ 63. placed beside Sk. *gárbh-a-s* (id.), esp. since a form *ἀδελφειός* corresponds perfectly to Sk. *sa-garbhyas* (co-uterinus) in its formn. It is worthy of note that *βρέφος*, too (v. sq.), stands close to Sk. *gárbhas*.

Note 2.—On Gk. *γ* and Sk. *h*, cf. § 53, 1.

Gk. *β*=origl. *g* (cf. § 68, 1, e); *√βα* in *βί-βη-μι*, *βά-σσω* (go)=Sk. and origl. *ga* (gə), in Sk. *gī-gā-mi*, origl. *ga-gā-mi*, Sk. *gā-mi*, origl. *ga-skāmi*; *βαρύς* (heavy)=Sk. *gurús* for origl. *garus*, *βάριστος*=Sk. *garīśthas*, origl. *garistas* (heaviest), cf. Lat. *gravis*=\**garu-i-s*, Goth. *kaúrs* (heavy, earnest) for \**kaúri-s*, and this prob. for \**kurr-i-s* fr. \**karr-i-s*; *βρέφος* (neut. offspring, child), Sk. *gárbha-s* (masc. matrix, offspring), O.Bulg. *žrěbe*, *žrěbici* (to foal), Goth. *kalbō* (fem. cow-calf); Boiôt. *βανά*=*γυνή* (wife) with root vowel *a* retained, f.f. of both *ganā*, *√gan* (gignere); *βάλανος* (acorn), cf. Lat. *glans*, *gland-is* (acorn); *βίβος* (life)=Sk. *gīrás*, Lith. *gýras*, Goth. *krius*, f.f. prob. *gigvas* (lively); *βοῦς* (bull)=Sk. and origl. *gāus*; *βι-βρώ-σσω* (eat), *βop-ά* (food), *√βop*, *βpo*, origl. *gar*, *grā*, Sk. *√gar* (swallow); Lat. *(g)uor-are*, Lith. *gér-ti* (drink), Sl. *žrě-ti* (swallow); *ἐρεβος* (gloom of lower world), cf. Sk. *rāj-as* (gloom, dust), Goth. *rikr-is* (neut. darkness); *√νιβ* in *χέρ-νιψ* (water for washing hands) for \**χερ-νιβ-s*, \**χερ-νιβ-os*, Sk. *√nig*, origl. *nig*, in Gk. retained in *νίζω* (wash)=\**νιγ-γω*.

2. Origl. *d*=Gk. *δ* (on *ζ*=*dy*, cf. § 68); *√δο*, origl. *da* (give), pres. *δί-δω-μι*, origl. *da-dā-mi*; *√δακ* (bite), pres. *δάκ-νω*, Sk. *√daç*, origl. *dak*; *√δαμ* in *δαμ-άω*, *δάμ-νημι* (tame, bind), Sk. and origl. *dam* (domare); *δόμος* (house), Lat. *domus*, Sk. *damás* or *damám*, Sl. *domu*; *√Fiδ* (see), origl. *√vid* (uidere), pf. *Foīda* (knew), Goth. *vait*, f.f. *vi-vāida*; *√έδ*, origl. and Sk. *√śad* (sedere) in *ἐξομαι*=\**sed-yo-mai*; *√έδ*, origl. and Sk. *√ad* in *ἐδ-ω*, *ἐδ-ομαι* (eat, shall eat), Lat. *ed-o*, Goth. *it-a*, etc.

3. Gk. *β*, whose origl. existence can be proved, is found very rarely (cf. § 46), e.g. *βλη-χή* (bleating), *βλη-χάομαι* (bleat), Lat. *bāl-are*, Sl. *ble-ya*, O.H.G. *blā-zan*; *βραχύς* (short), Lat.

*brev-is*, fr. \**bregu-is*, Scl. *brŭz-ŭ*; βδέ-ω (*pedo*), Bohem. *bzdi-ti*, § 63. Lith. *bezd-ėti*, Germ. *fist* (*flatus uentris sine crepitu*), thence *fist-en* (*flatum uentris emittere*), Scl.-Germ. thus with spirant bef. *d* (whether this spirant was inserted in Germ. or lost in Gk., H.G. *f* does not correctly correspond to *b* of other langg.), the f.f. of the root is thus *bda* or *bsda*=*bad* or *basd*.

*Note*.—χ, θ, φ, instead of γ, δ, β, in Gk., is barely seen in one single certain ex.; even the cases which G. Curt. (Gr. Et.<sup>2</sup> p. 449 sqq.) allows are more or less doubtful. Θεός (*god*) is in no way related to Δι-ός (gen. fr. Ζεύς), δῖος (*godlike*), Lat. *deus*, *diuos*, but, as G. Curt. makes probable, to √θεσ (Gr. Et.<sup>2</sup> p. 450) (*pray*), in θέσ-σεσθαι, πολὺ-θεσ-τος (*much-implored*), Πασι-θέη (*implored by all*), θέσ-φατος (*said by god*), θέσ-κελος (*godly*), θεῖος for \*θεσιος fr. st. θεο-, \*θεσο-, with regular loss of *o* bef. origl. suff. *ya*, and loss of *s* (cf. ἀλήθεια, i.e. \*ἀληθεσια fr. st. ἀληθέσ-), Lat. *fes* in *fes-tus*; μέθη (*drunkenness*) does not belong to Sk. √mad (*be drunk*), but to μέθυ (*n. intoxicating drink, wine*), Sk. and origl. *mádhu* (*honey-mead, intoxicating drink*), etc. Only in pf. act. we see in later formations χ and φ bes. γ and β (εἰ-λοχ-α fr. λέγ-ω, τέ-θυφ-α fr. θλίβ-ω, etc., v. pos

#### Original momentary sonant aspirated consonants. § 64.

1. Origl. *gh*=Gk. χ (on *xy*=σσ, cf. § 68), e.g. χήν (*goose*), cf. Germ. *gans*, f.f. *gansis*, Sk. *hāśá-s*, i.e. \**ghansas*, Lith. *žąsis*, Scl. *gasi*; √χv in χέF-ω (*pour*), χύ-σις (*pouring*), Goth. √gu-t, H.G. *gu-fs* (*giefs-en*); √άχ, άγχ in άγχ-ω (*throttle*), άχ-νυμαι (*am grieved*), άχ-ομαι (id.) άχ-ος (*pain, grief*), άχ-θος (*burthen*), άχ-θομαι (*am burthened*), origl. *agh*, Sk. *āh*, Lat. *ang*, Goth. *aggv*; √στιχ in στείχ-ω (*go*), στίχ-ος (*rank*), στοιχ-ος (*rank, file*), Sk. and origl. √stigh, Goth. *stig* in *steigan* (*step vb.*), *staiga* (*path*, the Sclavo-Lith. do not regard aspirates); √λιχ in λείχ-ω (*lick*), Sk. *lih*, earlier *rih*, i.e. *righ* (*lick*), Goth. *lig* in *bi-laig-ōn* (*ἐπι-λείχ-ειν*); √μιχ in ό-μιχ-έω (*urino*), ό-μίχ-λη (*mist*), Sk. *mih*, i.e. *migh* in *mēh-āmi* (*urino*), *mēgh-ās* (*cloud*), Germ. *mig*, e.g. Dutch *mīge* (*urina*); δολιχός (*long*), Sk. *dūrghás*, f.f. *darghas*, etc.

§ 64. In ἐγγύς (near)=Sk. *āhús*, i.e. *\*anghus* (narrow),—the Goth. *aygrus* (narrow) corresponds to the aspirated fms., which we hold to be origl. in this case, since we assign ἐγγ-ύς to √*āχ*, origl. *agh*, in ἄρχ-ω, ἄχ-ομαι, etc. (so G. Curtius).

Other isolated cases in which Gk. sonants, mostly after nasals, stand for origl. aspp., are treated by G. Curtius (Gr. Et.<sup>2</sup> p. 460 sqq.).

*Note.*—In νίφ-α (acc. snow), νίφ-ετός (snow-storm), νίφ-ει (it snows), φ stands for χ, cf. Lat. *nix*, *niu-is*, for *\*nig-s*, *\*nigu-is*, (v. post), *ning-it*; the root had an initial *s* lost in Graeco-Italic, cf. Lith. *snig-ti* (to snow), *snĕg-as* (snow), O.Bulg. *snĕg-ŭ* (snow), Goth. *snair-s* (snow), Zend √*gniš* (*ḡnaēš-enti*, 3 pl. pres. 'it snows,' lit. 'they snow'), Sk. √*snih* (be damp), f.f. of root is therefore *smigh*.

2. Origl. *dh*=Gk. *θ* (on *θγ*=σσ, cf. § 68), e.g. √*θε*, origl. *dha* (set), pres. τί-θη-μι, Sk. and origl. *dā-dhā-mi*, Goth. √*dā*, (do), H.G. *ta*, e.g. in 1 pres. *tuo-m* fr. *\*ti-tō-mi*=*dhadhāmi*; μέθυ (intoxicating drink), Sk. and origl. *mādhu*, O.H.G. *mētu* (mead); √*ιθ* in αἶθ-ω (kindle), Sk. and origl. √*idh*; ἐρυθ-ρός (red), √*puθ*, Sk. *rudhirás*, origl. *rudhras*, √*rudh*, Goth. √*rud* in *raud-s*, H.G. *rut* in *rōt*, Lat. *rūf-us*, etc.

*Note.*—In θερμός, Sk. *gharmás* (heat), Lat. *formus*, cf. Scl. *grĕ-ti* (to warm), Germ. *warm* fr. *\*gwarm*, √*θερ*, θερ-ομαι (am warm), θερ-ος (neut. summer), origl. and Sk. *ghar*, *θ* stands where we should expect *χ*.

3. Origl. *bh*=Gk. *φ*; √*φα* (shine) in *φα-ίνω* (show), *φάσ-ις* (a showing), √*φά* (speak) in *φη-μί*, *φά-σκω* (say), *φά-τις* (speech, rumour), *φω-νή* (voice), Sk. and origl. *bha*, Sk. *bhā-mi* (shine), *bhā-s* (give light, shine), *bhā-ś* (speak), Lat. *fa-ri*; √*φερ*, 1 sing. pr. *φέρ-ω* (bear), Lat. *fer*, *fero*, Sk. and origl. *bhar*, *bhār-āmi*, Goth. *bar*, *baira*; √*φν* in *φύ-ω* (bring forth), *φν-τόν* (plant), Lat. *fu* in *fu-turus*, *fu-i*, Sk. and origl. *bhu*, O.H.G. *pi* in *pi-m*, weakened fr. *\*pu*, *\*pi-um*; νέφ-ος (cloud), νεφέλη (a cloud), Sk. *nābhas* (a cloud), O.H.G. *nĕpal* (cloud); ὀφρύς (eyebrow), Sk. *bhrūs*, O.H.G. *prāwa*, etc.

*Note 1.*—In  $\sqrt{\lambda\alpha\beta}$  ( $\lambda\alpha\mu\beta\acute{\alpha}\nu\omega$ ,  $\acute{\epsilon}\text{-}\lambda\alpha\beta\text{-}\nu\omega$ , take, seize) *bes.* § 64.  $\lambda\acute{\alpha}\phi\text{-}\nu\rho\upsilon\sigma$  (booty),  $\acute{\alpha}\mu\phi\iota\text{-}\lambda\alpha\phi\text{-}\eta\varsigma$  (clasping), *Sk.*  $\sqrt{\text{labh}}$  (keep, get),  $\beta$  is very prob. a representative of origl.  $bh$ , caused perh. by the nasalized pres.  $\lambda\alpha\mu\beta\acute{\alpha}\nu\omega$ , cf. *supr.*  $\acute{\epsilon}\gamma\gamma\acute{\upsilon}\varsigma$  fr.  $\sqrt{\text{agh}}$ ; also  $\beta\rho\acute{\epsilon}\mu\text{-}\omega$  (roar) has  $\beta$  for origl.  $bh$ , cf. *Lat.* *frem-o*, *Sk.* *bhrám-āni* (swarm, rove). On other isolated exx. cf. *G. Curt. Gr. Et.*<sup>2</sup> p. 460 sqq., *Grassmann, Kuhn's Zeitschr.* xii. 91 sqq.).

*Note 2.*— $\sqrt{\text{Frag}}$  in  $\rho\acute{\eta}\gamma\text{-}\nu\mu\iota$  (break, tear),  $\rho\acute{\eta}\gamma\text{-}\mu\alpha$  (rent),  $\delta\iota\alpha\rho\acute{\rho}\acute{\omega}\xi$  (broken through) for  $\ast\delta\iota\alpha\text{-}\text{F}\rho\omega\gamma\text{-}\varsigma$  has *F* for origl.  $bh$  (as in case-sf. origl.  $bhi$  the  $bh$  may even be entirely lost, v. sub. declens.), cf. *Lat.*  $\sqrt{\text{frag}}$  in *frang-o*, *frag-men*, *frag-ilis*, *Goth.*  $\sqrt{\text{brak}}$  in *brik-an* (break), pf. *brak*. The same change occurs in  $\sqrt{\text{Fag}}$ ,  $\acute{\alpha}\gamma\text{-}\nu\mu\iota$  (break),  $\acute{\alpha}\text{-}\alpha\gamma\text{-}\eta\varsigma$  (unbroken), cf. *Sk.*  $\sqrt{\text{bhañ}}$  in *bha-ná-g-mi* (I break), *bhañgi-s* (breakage). It is uncertain whether the roots *bhag* and *bhrag* are akin.

Roots which origly. began and ended with an asp. also lose in *Gk.* their initial asp., whereby there thus arises a *tenuis* (cf. *sup.* § 64). Thus e.g.  $\pi\acute{\eta}\chi\upsilon\text{-}\varsigma$  (fore-arm) stands for  $\ast\phi\eta\chi\upsilon\text{-}\varsigma$ , cf. *Norse* *bōg-r*, *O.H.G.* *buoc*, like *Sk.* *bāhú-s* (arm) for  $\ast bhāghu\text{-}s$ ;  $\pi\upsilon\theta\text{-}\mu\acute{\eta}\nu$  (base) for  $\ast\phi\upsilon\theta\text{-}\mu\eta\nu$ , like *Sk.* *budh-nás* (floor) for  $\ast bhudh\text{-}na\text{-}s$ , cf. *O.H.G.* *bod-am*, *Lat.* *fu-n-d-us*;  $\pi\epsilon\upsilon\theta\text{-}\epsilon\rho\acute{\omicron}\varsigma$  (father-in-law),  $\pi\epsilon\upsilon\theta\text{-}\epsilon\rho\acute{\alpha}$  (mother-in-law),  $\pi\epsilon\acute{\iota}\sigma\text{-}\mu\alpha$  (bond, halser) for  $\ast\pi\epsilon\upsilon\theta\text{-}\mu\alpha$  fr.  $\sqrt{\pi\epsilon\upsilon\theta}$  for  $\ast\phi\epsilon\nu\theta$  (bind), like *Sk.* *bandh* for  $\ast bhandh$  (in *Sk.* also 'relationship' derived fr. 'bonds,' e.g. *bandh-u-s*, a relation); so too the *Goth. fm.* *band* points to this (pres. *bind-a*, pf. *band*);  $\sqrt{\pi\upsilon\theta}$  for  $\ast\phi\upsilon\theta$  in  $\pi\upsilon\upsilon\theta\text{-}\acute{\alpha}\nu\omicron\mu\alpha\iota$ ,  $\pi\acute{\epsilon}\upsilon\theta\text{-}\omicron\mu\alpha\iota$  (learn, ask), *Sk.* *budh* for  $\ast bhudh$  (be awake, know, be wise), *Lith.*  $\sqrt{\text{bud}}$  (*bud-ėti* be awake, *bud-rú-s* wakeful), *O.Bulg.* *būd* (*būd-ėti* be awake, *bud-iti* wake), *Goth.* *bud* (*biud-an* bid, though with a considerable change of meaning). A perfectly analogous phenomenon is seen in redupln.-laws (§ 68); cf. *Grassm. Kuhn's Zeitschr.* xii. 110 sqq.

## CONSONANTAL PROLONGED-SOUNDS.

## § 65.

Origl. spirants;  $\gamma$ ,  $s$ ,  $v$  (the changes of origl.  $y$ ,  $v$  have been treated at length by *G. Curt. Gr. Et.*<sup>2</sup> pp. 491-611).

§ 65. 1. Origl.  $y$ =Gk.  $\iota$ ,  $\epsilon$ ,  $\zeta$ ,  $\epsilon$ , is lost (on  $y$  in  $\zeta$ ,  $\sigma\sigma$ , cf. § 68, 1 b, d, e). From assimiln. of  $y$  to other consonn. ( $\kappa\epsilon\rho\acute{\rho}\omega$  for  $*\kappa\epsilon\rho$ - $y\omega$ ,  $\epsilon\lambda\acute{\alpha}\sigma\sigma\omega\nu$  for  $*\epsilon\lambda\alpha\chi y\omega\nu$ , etc.), it follows that it was not lost till late in Gk. To the existence of  $y$  in Gk. evidence is given by the operation of the consonantal beginning of Hom.  $\acute{\omega}\varsigma$  (as)=origl.  $y\acute{\alpha}t$  (abl. of st.  $y\alpha$ -), and that of  $\acute{\iota}\epsilon\tau\omicron$ ,  $\acute{\iota}\epsilon\mu\epsilon\nu\omicron\varsigma$ , etc., origl.  $\sqrt{y\alpha}$  (go); even the writing of  $F$  for  $y$  in  $F\acute{\omicron}\tau\iota$  and  $T\lambda\alpha\sigma\iota\alpha F\omicron$  proves it, on which point we may follow G. Curt. Gr. Et.<sup>2</sup> no. 606, p. 354.

a. Gk.  $\iota$ =origl.  $y$ , e.g. in the common st.-formative sf. origl.  $y\alpha$ , Gk.  $\iota\omicron$ , thus  $\pi\acute{\alpha}\tau\epsilon\rho$ - $\iota\omicron$ - $\varsigma$  (fatherly), origl.  $p\alpha\tau\alpha\rho$ - $y\alpha$ - $\varsigma$ ;  $\tau\epsilon\lambda\epsilon\acute{\iota}\omega$ , thence  $\tau\epsilon\lambda\acute{\epsilon}\omega$  (finish), for  $*\tau\epsilon\lambda\epsilon\sigma$ - $y\omega$ , pres. fm. in  $y\alpha$  fr. st.  $\tau\epsilon\lambda\epsilon\varsigma$ - ( $\tau\acute{\epsilon}\lambda\omicron\varsigma$ , neut. end), etc., vid. § 26.

Here there occurs also a transposition of origl.  $y$  after a liquid cons. to Gk.  $\iota$  before the liquid, e.g.  $\phi\theta\epsilon\acute{\iota}\rho\omega$  (destroy) fr.  $*\phi\theta\epsilon\rho$ - $y\omega$ , etc., v. § 26, 3.

b. Gk.  $\epsilon$ =origl.  $y$ , e.g.  $\kappa\epsilon\nu\epsilon\acute{\omicron}\varsigma$  (empty) for  $*\kappa\epsilon\nu y\omicron\varsigma$ , as is shown by Aiol.  $\kappa\acute{\epsilon}\nu\nu\omicron\varsigma$  fr. Sk.  $\zeta\bar{u}n y\alpha$ - $s$  beside  $*\kappa\epsilon\nu y\omicron$ - $\varsigma$  we may infer an origl.  $\kappa\nu\alpha n y\alpha$ - $s$  common to both;  $\sigma\tau\epsilon\rho\epsilon\acute{\omicron}\varsigma$ = $\sigma\tau\epsilon\rho\acute{\rho}\acute{\omicron}\varsigma$  (hard, solid) fr.  $*\sigma\tau\epsilon\rho$ - $y\omicron\varsigma$ ;  $\theta\upsilon\rho\epsilon\acute{\omicron}\varsigma$  (door-stone, door-shaped shield) fr.  $*\theta\upsilon\rho y\omicron\varsigma$ , with origl. sf.  $y\alpha$ , fr.  $\theta\acute{\upsilon}\rho\alpha$ , door. v. § 26, 2.

c. Gk.  $\zeta$ =origl.  $y$ , e.g.  $\sqrt{\zeta\nu y}$  in  $\zeta\epsilon\acute{\iota} y\nu\nu\mu\iota$  (bind),  $\zeta y\acute{\omicron}\nu$  (yoke), Lat.  $iug$ - $um$ , Sk.  $yug\acute{a}m$ , etc., Lat. Sk. origl.  $\sqrt{yug}$  (iungere);  $\zeta\acute{\epsilon}\omega$  (seethe, intr.),  $\sqrt{\zeta\epsilon\varsigma}$ , cf.  $\check{z}$ - $\zeta\epsilon\sigma$ - $\mu\alpha\iota$ ,  $\zeta\epsilon\sigma$ - $\tau\acute{\omicron}\varsigma$ , O.H.G.  $j\ddot{e}s$ - $an$  (H.G.  $g\ddot{a}ren$ ), f.f. of root is  $yas$ ;  $\zeta\acute{\epsilon}F\alpha$  (spelt), Lith.  $y\acute{a}n\alpha\varsigma$ , pl.  $y\alpha\nu\acute{a}\iota$  (barley), Sk. st.  $y\alpha\nu\alpha$ - (grain).

Note.—A  $d$  has been here developed bef. origl.  $y$ , for  $\zeta=dz$  or  $dy$ , precisely as in other langg. we find a change fr.  $y$  to  $dy$ , and further to  $d\check{z}$ , e.g. Lat. *maiores*, middle-Lat. *madiores*. It. *maggiore*, i.e. *madzore*; Prākrt *gutta*, i.e. *džutta*=*yukta*. G. Curtius (Gr. Et.<sup>2</sup> p. 550 sqq.) compares this  $dy$  for  $y$  with  $gv$  for  $v$ , which appears not unfrequently in later periods of speech (e.g. It. *guastare* fr. Lat. *uastare*). Curt. also adds  $\delta\iota$ =origl.  $y$ , in sf.  $\delta\iota\omicron$ - (e.g.  $\kappa\rho\nu\pi\tau\acute{\alpha}$ - $\delta\iota\omicron\varsigma$ , secret)=origl.  $y\alpha$ , and  $\delta\epsilon$ = $*\delta y$ =origl.  $y$  in sf.  $\delta\epsilon\omicron$ - (e.g.  $\acute{\alpha}\delta\epsilon\lambda\phi\acute{\iota}$ - $\delta\epsilon\omicron$ - $\varsigma$ , nephew), and

further  $\delta$ =origl.  $y$  by entire loss of  $y$  after the  $\delta$  wh. it produced, through intermed. step.  $*\delta y$ . This case is indisputable in Boiôt.  $\delta\nu\gamma\acute{o}-\nu$  (yoke) =  $*\delta y\nu\gamma\acute{o}-\nu$  =  $\xi\nu\gamma\acute{o}-\nu$  = origl.  $yuga-m$  (yoke); further G. Curt. assumes it in  $\delta\eta$  (iam) for  $*dy\acute{a}$ ,  $*y\acute{a}$ , perh. an instr. pron. st. origl.  $ya$ , cf. Lat. *iam*, Lith. *yaù*, Goth. H.G. *ju*, and others fr. same st.; it then becomes evident that the  $\delta$  of apparent sf.  $-id-$  is nothing but  $iy$  for  $i$ , e.g.  $\mu\eta\text{-}\nu\iota\text{-}\omicron\varsigma$  and  $\mu\eta\text{-}\nu\iota\delta\text{-}\omicron\varsigma$  fr.  $\mu\eta\text{-}\nu\iota\text{-}s$  (wrath;  $\sqrt{ma}$ , think, also be wroth, sf.  $n\acute{i}$ )  $\theta\acute{\epsilon}\text{-}\tau\iota\text{-}\omicron\varsigma$  and  $\theta\acute{\epsilon}\text{-}\tau\iota\delta\text{-}\omicron\varsigma$  (each case formed by sf.  $ti$ ), also  $\phi\rho\omicron\nu\text{-}\tau\iota\delta\text{-}\omicron\varsigma$ ,  $\xi\rho\iota\delta\text{-}\omicron\varsigma$  bes.  $\xi\rho\iota\text{-}\nu$ , etc.; everywhere therefore we must presuppose in these cases a Gk. f.f. such as  $*\mu\eta\text{-}\nu\iota\gamma\text{-}\omicron\varsigma$ ,  $*\theta\epsilon\text{-}\tau\iota\gamma\text{-}\omicron\varsigma$ . Also the sf.  $ad$  and others with  $\delta$  are due to origl.  $y$  acc. to Curtius. Though we cannot treat in detail of the deductions of G. Curtius, we may remark in general on his opinion, that whilst  $y$  is remarkably common in st.-formation of Indo-Eur.,  $d$  is a rare element, so that we see scarcely any other possibility of bringing the above-named Gk. fms. into harmony with those of the kindred langg. The assumption of so many termns. in special cases of later Gk. forms is, however, not perfectly certain; nevertheless that  $y=\delta$  in  $\delta\nu\gamma\acute{o}\nu$  is beyond doubt. Further the dental certainly corresponds to origl.  $y$  in  $\chi\theta\acute{\epsilon}s$  =  $*\chi\delta\acute{\epsilon}s$ ,  $*\chi\delta y\acute{\epsilon}s$ ,  $*\chi y\acute{\epsilon}s$  = Sk. *hyas* (yesterday), f.f. *ghyas*, cf. Lat. *her-i*, *hes-truus*, Goth. *gis-tra-dagis*. What we admit in these cases is possible in others too.

d. Gk.  $\acute{e}$  = origl.  $y$ , e.g.  $\eta\pi\alpha\rho$  (liver), cf. Lat. *iecur*, Sk. *yákr̥t*;  $\alpha\gamma\iota\omicron\varsigma$  (holy), Sk. *yağyas* (to honour, worship), origl.  $\sqrt{yag}$ ;  $\omega\rho\alpha$  (season), cf. O.Bulg. *jāre* (n. year), Goth. *yēr*, O.H.G. *jār*;  $\acute{\upsilon}\sigma\text{-}\mu\acute{\iota}\nu\text{-}$  (retained only in loc. sg.  $\acute{\upsilon}\sigma\text{-}\mu\acute{\iota}\nu\text{-}\iota$ ),  $\acute{\upsilon}\sigma\text{-}\mu\acute{\iota}\nu\eta$  (combat),  $\sqrt{\acute{\upsilon}s}$  bef.  $\mu$  for  $\acute{\upsilon}\theta$  = Sk. *yudh* (fight), e.g. in *yudh-ma-s* (fight, fighter), *yudh-māna-m* (fight), which agrees with the Gk. in the sf. also;  $\acute{\upsilon}\mu\epsilon\text{-}\acute{\iota}s$  (you), cf. Sk. *yuśmā-t* (abl.; it here depends of course from the stem only), Lith. *jūs* (you), etc.

e. In Gk.  $y$  is entirely lost (cf. § 27), e.g. initial  $y$  in Aiol.  $\acute{\upsilon}\mu\mu\epsilon\text{-}s$  (you), cf. Sk. *yuśmā-t* (abl.);  $\delta\tau\tau\iota$  in Sappho fr. st.  $\acute{o}$  = origl.  $ya$ -. In the middle of words this loss is more frequent; after consonn., e.g. in termn. of fut.  $-\sigma\omega$  for  $*\sigma y\omega$ , cf. Dôr. fm.  $-\sigma\acute{\iota}\omega$  = Sk. and origl.  $-\sy\acute{a}\text{-}mi$ ; betw. vowels the loss of  $y$  is commonest of all, as in the termns. of derivative vbs.  $-\acute{\epsilon}\omega$ ,  $-\acute{\alpha}\omega$ ,  $-\acute{\omicron}\omega$ , which alike represent the origl. and Sk.  $-\ay\acute{a}mi$ , e.g.  $\phi\omicron\rho\acute{\epsilon}\omega$

§ 65. (bear)=Sk. and origl. *bhār-āyāmi*; \*in cases like τελέω fr. τελείω, for \*τελεσ-γω, with origl. sf. *ya* fr. st. τελες- (τέλος neut. end), in -ω for \*-υγω (φύω earlier φυίω, f.f. *bhuyāmi*, etc.); in gen. sg. masc. and neut. of *o*-st., origl. *a*-st., e.g. ἵππου fr. ἵπποο, and this certainly fr. ἵπποιο, which stands for \*ἵπποσγο, origl. *akvasya*; πλεόν (more) bes. πλείον, f.f. *pra-gans*, comp. fr. √*par*, *pra* in πολ-ύ- (many), f.f. *par-u*-. Thus in most cases, before *y* entirely disappeared, it became *i*.

*Note*.—The assimilatn. of *y* to other consonn., e.g. λλ=λγ and the like, and its combination with gutt. and dentt. as ζ, σσ, is treated of under 'sound-laws,' § 68.

2. Origl. *s*=Gk. σ, ς, is lost.

a. Gk. σ=origl. *s* in termn. and bef. mutes, more rarely bef. vowels, e.g. √*ēs*, origl. *as* (esse), ἐσ-τί, Sk. and origl. *ás-ti* (he is); st. μέves- n. μένος (might, strength), origl. and Sk. *mānas*; sf. of nom. sg. masc. fem. -s, e.g. πόσι-ς, ὄψι=Ὀψι-ς, Sk. and origl. *pāti-s*, origl. *vāk-s*; sf. gen. sg. -ος, origl. -as, e.g. Φοπ-ός, origl. *vāk-as*, Sk. *vāk-ás*, etc.; √*στορ*, Sk. and origl. *star*, e.g. in 1 sg. pres. στορ-έννυμι, στόρ-νυμι (spread), Sk. *str-ñōmi*, origl. *star-naumi*, etc.; √*στα*, ἵστημι (set), origl. *sta-stā-mi*, Lat. and origl. *sta*; σῦς bes. ὕς (swine), Lat. *sūs*, O.H.G. *sū*; σέβ-ομαι (be in awe of), σεμ-νός (awful) for \*σεβ-νος, σοφ-ός (wise), and others show likewise init. *s* bef. vowel; σιγάω (am silent) bes. O.H.G. *swīgēn* has exceptionally σ for older *sv*, which regularly should become ς; it is also found in σελ-ήνη (moon), fr. origl. √*svar* (shine), and perh. in some other instt., cf. σέλ-ας (sheen), ἐλ-άνη (torch), with usual sound-change, fr. same root (cf. G. Curt. Gk. Et.<sup>2</sup> p. 625). This σ bes. ς, we must prob. consider to be an archaism, which has been partially retained.

b. Gk. ς=origl. *s*, when it is initial before a vowel or origl. *v*, e.g. √*εδ*, ἔδ-ος, ἔδ-ρα (seat), ἕζομαι (set myself, sit) for \*ἔδ-γομαι, Lat. *sed*, origl. and Sk. *sad* (sit); ἑπτά (seven), Lat. *septem*, origl. and Sk. *saptān*-; √*έπ* in ἔπ-ω, ἔπ-ομαι (follow),



Lat. *sequ-or*, Sk.  $\sqrt{sak}$ , origl. *sak*; ὕπνος (sleep), origl. and Sk. § 65. *svāpnas*; ἡδύς (sweet), f.f. Sk. and origl. *svādús*; pron.  $\sqrt{é}$ ,  $\acute{o}$ , in  $\acute{o}\acute{u}$ ,  $\acute{o}\acute{l}$ ,  $\acute{é}$  (sui, sibi, se),  $\acute{o}\varsigma$  (suos), origl. and Sk. *sva-*; *ἐκυρός* (father-in-law), f.f. *svakuras*, Sk. *sváçuras* for *sváçuras*, Lat. *socer*, Goth. *svaihra*, etc.

*Note.*—It is not probable that the  $\acute{c}$  (which regularly represents *s*) in words which origly. began with *sv* compensates for the *v*, and that *s* afterwards entirely disappeared from before it. If the earlier lang. shows *F* even then, we may prob. assume that the sign of the asp. was not written bef. *F*, and that we must theref. read *Fé* and the like as *hve*; the long duration of *s* in Gk. seems proved by parallel fms. in diall., such as σφός.

Not uncommonly we find medial  $\acute{c}$  after vowel transferred to initial  $\acute{c}$  bef. vowel; e.g. *ἱερός* (strong, holy) fr.  $\ast\acute{\iota}\acute{\epsilon}\rho\acute{o}\varsigma$ ,  $\ast\acute{\iota}\sigma\epsilon\rho\acute{o}\varsigma$  = Sk. *iṣirá-s* (strong, fresh); *εἰρόμην* fr.  $\ast\acute{\epsilon}\text{-}\acute{\epsilon}\rho\acute{o}\mu\eta\nu$ ,  $\ast\acute{\epsilon}\text{-}\sigma\epsilon\rho\acute{o}\mu\eta\nu$ ,  $\sqrt{\acute{\epsilon}\pi}$  (follow) for  $\ast\sigma\epsilon\pi$ , origl. *sak*; *εἰστήκειν* fr.  $\ast\acute{\epsilon}\text{-}\acute{\epsilon}\sigma\tau\eta\kappa\epsilon\iota\nu$ ,  $\ast\acute{\epsilon}\text{-}\sigma\epsilon\sigma\tau\eta\kappa\epsilon\iota\nu$ ,  $\sqrt{\sigma\tau\alpha}$  (stand), redupld. *sa-sta*,  $\ast\sigma\epsilon\text{-}\sigma\tau\alpha$ ; *εὔω* bes. *εὔω* (kindle),  $\sqrt{\acute{u}\varsigma}$ , origl. *us*, Sk. *uś* (burn), f.f. *ausāmi*, in Gk. first  $\ast\acute{\epsilon}\acute{u}\sigma\omega$ ,  $\ast\acute{\epsilon}\acute{u}\acute{\omega}$ ; *έως* (dawn) for  $\ast\acute{\epsilon}\acute{\omega}\varsigma$  fr.  $\ast\acute{\epsilon}\acute{u}\acute{\omega}\varsigma$ ,  $\ast\acute{\epsilon}\acute{F}\acute{\omega}\varsigma$ , cf. Aiol. *αὔως* for  $\ast\alpha\acute{u}\sigma\omega\varsigma$  (*ήως* by compens. lengthening for  $\ast\acute{\alpha}\acute{F}\sigma\omega\varsigma$ ), f.f. of st. is *aus-as-*, cf. Sk. *uś-ás-* (f. dawn), fr. same  $\sqrt{us}$ , Lat. *aurōra* for  $\ast\text{aus-}\acute{o}\varsigma\text{-}a$ , likewise, as in Gk., with step-formn. of root; *ἡμαι* (sit) for  $\ast\eta\sigma\text{-}\mu\alpha\iota$ , cf. Sk. *ās-ē* for  $\ast\acute{a}\varsigma\text{-}\mu\alpha\iota$ , here in Gk. the init.  $\acute{c}$  became fixed by analogy throughout, and is added also in *ἡσ-ται* for  $\ast\eta\sigma\text{-}\tau\alpha\iota$  = Sk. *ās-tē*; *ἡμεῖς* (we), cf. Sk. *as-mā-t*, *ἡμεῖς* thus stands by compens. lengthening for  $\ast\acute{\alpha}\sigma\text{-}\mu\epsilon\iota\varsigma$ , whence the parall. fm. *ἄμμες* =  $\ast\acute{\alpha}\sigma\mu\epsilon\varsigma$ , in which the  $\sigma$  has become assimilated to the  $\mu$ ; in *ἡμεῖς* therefore the real *s* is doubly represented.

*Note.*—At first sight *έός* bes. *σφός* and  $\acute{o}\varsigma$  seems clearly fr. a Gk. f.f.  $\ast\sigma\acute{F}\acute{o}\varsigma$ , viz. *έός* for  $\ast\acute{\epsilon}\acute{o}\varsigma$  (*ehos*) fr.  $\ast\acute{\epsilon}\acute{F}\acute{o}\varsigma$  (*ehvos*), and this fr.  $\ast\acute{\epsilon}\sigma\acute{F}\acute{o}\varsigma$ ,  $\ast\acute{\epsilon}\text{-}\sigma\acute{F}\acute{o}\varsigma$  for  $\ast\sigma\acute{F}\acute{o}\varsigma$ , with the favourite vowel-prefix, which does not occur in *σφός* and  $\acute{o}\varsigma$ ; but when we recollect the Lat. *suus*, earlier *souos*, i.e.  $\ast\text{seuos}$  (§ 33, 2), we are

§ 65. led back to a special Gr.-Ital. f. *\*sevos* (cf. Lith. *sávo* fr. an unused *\*sava-s* suus), which necessarily becomes in Lat. *souos*, *suus*, in Gk. *έFος*; then too we must understand *τεός*=*\*τεFος*=*tuus*, i.e. *\*toros*, *\*tevos*, Lith. *táva-s* (tuus). Cf. § 26 n.

Sometimes *‘* appears as a later addition; it seems that the sensibility of the lang. to the distinction betw. *‘* (*h*) and *’* (Semit. *‘*elif*’*) began to decay rather early (cf. c.), thus e.g. in *ἵππος* (horse) fr. *\*ἱκFος*, cf. the extant fm. *ἵκκος*, Lat. *equos*, Sk. *ákras*, f.f. *akras*; that *‘* occurs here only in later times is proved by forms like *Λεύκιππος*, *Ἀλκιππος*, which otherwise would have been pronounced *\*Λευχιππος*, *\*Ἀλχιππος*; *ὑστερος* (later)=Sk. *út-taras*; *υ* is so frequently an initial sound, for origl. *su*, *sva*, that the more uncommon beginnings which would properly be *υ*, followed the analogy of *υ*; here belongs prob. *ὕδωρ* (water), cf. Boiôt. *οὔδωρ*, Lat. *unda*, Sk. *ud-am*, *ud-akám* (water), Goth. *vatō*, Lith. *vandʹu* (with earlier *vad*=*ud*); *ὑφ-η*, *ὑφ-ος* (web), *ὑφ-αίνω* (weave), cf. Germ. *√wab* (weave), Sk. *ūrṇa-vābh-i-s* (m. spider, lit. woolweaver), *√vabh*, fr. which therefore may arise regularly a fm. *ubh*, Gk. *ύφ*; for *\*ύδ*, *\*ύφ*, in these words, *\*we* must presuppose an origl. *vad*, *vabh*, for which through loss of *a* arose *ud*, *ubh*.

c. In Gk. origl. *s*, or rather *‘*, which arose fr. origl. *s*, is entirely lost (cf. § 28). This occurs regularly in middle of words betw. vowels, and more rarely in initio bef. vowels, whilst it is regular bef. initial *ν* and *ρ*; e.g. *μένος*, gen. *μένους* fr. *μένεος*, *\*μενεσος*, f.f. and Sk. *mánasas*; *φέρη* fr. *\*φερεσαι*, origl. *bharasai*; *μῦς* (mouse), gen. *μυός*=Lat. *mus*, *muris*, both fr. *\*musas*; *φῶς* (poison) for *\*Fίσος*=Lat. *virus*, Sk. *viśa-s* and *viśa-m*; etc. Yet we also find *s* kept betw. vowels, e.g. *ἰδο-σαι*, *τίθε-σαι*, *ἴστα-σαι*.

In initio bef. vowels *‘* has fallen out in *ἀ-* (for and bes. *ἄ-*), *ὀ*=origl. and Sk. *sa-* (with), e.g. in *ἀ-δελφεός*, *ἄ-δελφός* (brother, lit. couterinus, cf. *δελφύς* uterus); *ἄ-λοχος* (spouse, consors tori, cf. *λέχος*, bed); *ὅ-πατρος* (having the same father, cf. *πατήρ*), etc., bes. *ἄ-πας* (all); *ἐτεός* (true, correct)=Sk. *satyá-s*; *√έχ*

(in ἔχ-ω hold, have)=Sk. *sah* (*sāh-atē*, he holds, carries; this § 65. √*éχ*=*sagh* is confused in Gk. with √*vagh*, uehere); ἰδῖω (sweat), Sk. and f.f. *svīdyāmi*, bes. ἰδ-ρώς (sweat); ἡδ-ος (pleasure, delight) bes. ἡδ-ύς (sweet)=Sk. and origl. *svād-ús*, √*svad*; οὖλο-ς (Old-Ep. and Iōn.) bes. ὅλος (whole), Gk. f.f. *solvo-s*=Lat. *saluo-s*, *sollo-s*=Sk. *sárva-s*; ἑ-σταλ-κα, pf. fr. pres. στέλ-λω (place, send) for \*ἑ-σταλ-κα, \*σε-σταλ-κα; ἑ-σπαρ-μαι, pf. pass. fr. σπειρω (sow)=\*σπερ-γω, similarly for \*ἑ-σπ, \*σε-σπ. We see that the dropping of the *h*-sound, which has taken place throughout in mod. Gk., began even very early (G. Curt. Gr. Et.<sup>2</sup> p. 612 sqq.). The feeling of the lang. for *h* was weakened even in early Gk. (cf. supr. 2, b.).

*Note.*—The st. ὄντ- in ὄν=\*ὄντ-ς, οὖσα=\*ὄντιγα, ὄν=\*ὄντ=origl. *as-ant-*, pres. part. act. of origl. √*as* (esse), only apparently belongs here. The earlier fms. of this part. ἑών, etc., point to a once-existent fm. \*ἑόντ-, \*ἑσ-οντ-, with √*és* preserved, fr. which fm. the *s* regularly dropped out, \*ἑσ-οντ- thus became ἑοντ-, later the *ε* fell off, and thus arose ὄντ-.

*s* falls away bef. *ν* in νύς (bride, daughter-in-law), Lat. *nurus*, but O.H.G. *snur*, *snura*, Sk. *snušā*, O.Bulg. *snūcha*, accordingly we must assume also a Gk. f.f. \*σνυσο-ς; √*νν* in νέF-ω (swim), impf. however in Hom. ἐννεον fr. \*ἑ-σνεF-ον, Sk. and origl. √*smu* (flow, drip).

*s* is lost bef. *ρ* in √*ρν* (flow), ῥέω, ῥντός=Sk. and origl. *sru*, Germ. *stru*, with inserted *t*, in *ström*, Lith. *sru* and *stru*, Scl. *stru* in *o-strov-ŭ* (περίρρυτος, i.e. isle). Also here *s* is preserved by assimilat. to *ρ*, e.g. ῥῥύην, ῥῥέυσσα for \*ἑ-σρυ-ην, \*ἑ-σρευ-σα.

Also in √*μερ* in μέρ-μερ-ος (careful), μέρ-ιμνα (care), μάρ-τυς (witness), as in Lat. *me-mor* and Germ. *māri* (felt), the *s* is lost which is preserved in Sk. *smar*, pres. *smārāmi* (I remember, recall). The same loss perh. occurs elsewhere, though *σμ* was not disliked as an initial sound.

Before other sounds the loss of *s* is rarer, yet cf. ταῦρο-ς (bull), Lat. *tauru-s*, O.Bulg. *turŭ*, with Sk. *sthūrā-s* (bull), Zend

§ 65. *ctaora-* (larger cattle, draught-oxen), Goth. *stiur* (bull, calf); sts. the interchange betw.  $\sigma\tau$  and  $\tau$  is prob. merely a dialectical one, e.g.  $\tau\acute{\epsilon}\gamma\text{-}\sigma$  bes.  $\sigma\tau\acute{\epsilon}\gamma\text{-}\sigma$  (roof),  $\sigma\tau\acute{\epsilon}\gamma\text{-}\omega$  (cover), Lith. *stóg-as* (roof), *stég-ti* (to cover), Sk.  $\sqrt{\text{sthag}}$ , origl. *stag* (cf. Lat. *teg-o*, Germ. *decken*,  $\sqrt{\text{dak}}$ , without initial *s*). For further exx. of this phenomenon, which is hard to decide upon, vid. G. Curt. Gr. Et.<sup>2</sup> p. 621 sqq.

The assimila. of *s* to other consonn. is treated, § 68; the loss of *s* with compens. lengthening, § 28.

3. Origl. *v*=Gk. *υ*, *F*, which was lost in the later langg.; origl. *v* is expressed by  $\epsilon$ .

a. Gk. *υ*=origl. *v*, e.g.  $\delta\acute{\upsilon}\omega$ ,  $\delta\acute{\upsilon}\sigma$ , which bes.  $\delta\acute{\omega}\delta\epsilon\kappa\alpha$  proves an early Gk. st.  $\delta\acute{\upsilon}\sigma$ =Sk. *dva-*; the same holds good in  $\kappa\acute{\upsilon}\omega\nu$  (dog), bes. Lat. *canis* for *\*quani-s*, Sk. *çrā* (nom. sing. for *\*çvan-s*, st. *çvan-*, *çun-*), and in some other cases. It is very hard to decide whether *v* or *u* was the origl. here; perh. *uv* (Engl. *w*) is the earliest.

On the Aiolic vocalisation of *v* between vowels ( $\chi\acute{\epsilon}\upsilon\omega$ = $\chi\epsilon F\omega$ , etc.), so too on the transposition of *v* near liquid consonants, as e.g. *γουνός*=Aiolic  $\gamma\acute{\omicron}\nu\nu\sigma$  from *\*γουνFος*, st. *γουνυ-* (knee), with *-ος* of the gen. sg., before which *v*, that is *u*, passes over into *F*, *δουρός*, *δούρατος*, fr. *\*δουFος*, *\*δουFατος*, from which are explained also *δωρός*, *δώρατος*, by loss of *v*, cf. nom.  $\delta\acute{\omicron}\rho\nu$  (spear), v. supra § 26 b, 1, 3.

b. Gk. *F*,<sup>1</sup> which was lost in the later stage,=origl. *v* (cf. § 27), e.g. *Foivos* (wine), cf. Lat. *uinum*, O.Lat. *ueinom*, f.f. of st. *vaina-* (or, acc. to Gk., *vaina-*); *Foikos* (house), Lat. *uicus*, i.e. O.Lat. *ueicos*, Sk. *vēça-s*, origl. *vaiika-s*; *Féprɔv* (work),  $\sqrt{\text{Fepɔ}}$ =Sk. *vṛg*, *ūrḡ*, Germ. *vark* (work, to work), origl. *varg*;  $\sqrt{\text{Fið}}$  (see, know), origl. Sk. *vid*, Lat. *uid*, Germ. *vit*, e.g. in *Fið-mev*=Sk. and origl. *vid-māsi*, *Foīða*=Sk. *vēða*, Goth. *vait*,

<sup>1</sup> J. Savelsberg, "de digammo eiusque immutationibus dissertatio," pars i. Aquisgranii, 1864; pars ii. 1866.

f.f. *vivāida*; √*Feπ*, speak=Lat. *uoc* for \**uec*, Sk. *vaḥ*, origl. *vak*, § 65. e.g. in *Fép-ος* (word)=Sk. *vák-as* (speech); ὄ*Fiς* (sheep)=Lat. *ouis*, Lith. and origl. *avīs*; ᾠ*δον* for \*ᾠ*Fiον*, f.f. *āvya-m*, fr. origl. *avi-s*, Lat. *avi-s* (bird); νέ*Fος* (new)=Lat. *nouus* for \**neuos*, Sk. and f.f. *nāva-s*; πλέ*F-ω* (sail), √*πλν*=Lat. \**plou-o* for \**pleu-o* (pluo), Sk. and origl. *plāv-āmi*; ῥέ*F-ω* (flow), √*ῥν*, origl. and Sk. *srāv-āmi*, √*sru*, cf. ῥεῦ-*μα* (stream); sf. -*Feντ-*=Sk. and origl. -*vant-* (e.g. in *στονó-Fεσσαν*=*-Feτ-γαν*, with loss of nasal); ναῦς (ship), gen. νᾱ*Fός*=Sk. and origl. *nāus*, gen. *nāv-ás*; after consonn. e.g. in δώδεκα (twelve), δίς (twice), for \*δ*Fω-δεκα* \*δ*Fi-ς*, st. δ*Fo-*, δ*Fi-*, origl. *dva-* (cf. *δύο*); δορός, γόνατος, fr. \*δoρ*Fος*, \*γoν*Fατος*, cf. δόρυ (spear), γόνυ (knee), etc.

*Note.*—Thus *vy* can disappear in medio betw. vowels; this occurs in sf. *tav-γα*, formed by *γα* and step.-formn. of stem termn. of abstracts in *tu*, sounded in Gk. as τέο, e.g. δοτέος (dandus)=Sk. *dātāvyas*; θετέος (ponendus)=Sk. *dhātāvyas*.

c. Gk. ' = origl. *v* in ἔσπερος, ἑσπέρα (evening), cf. Lat. *uesper*, *vespera*; ἵσ-τωρ bes. ἴσ-τωρ, a fm. which we expect according to *Fiδ-μεν*, st. *Fiδ-τορ-* (knowing, witness), thence ἵστορ-ία (questioning, history), √*Fiδ*; ἔννυμι (clothe), εἶμα (garment), Aiol. *Fέμμα*=\**Fέσ-νυμι*, \**Fεσ-μα*, √*Fes*, cf. Lat. *ues-tire*, Sk. and f.f. of √*vas*: ' may, however, here have arisen also fr. *s*, and then been transposed: cf. supr. 2 b.

*Note.*—In isolated exx. β = origl. *v*, βούλομαι (I will), which we hold stands for \*βoλνομαι (cf. Sk. *vrñé*, f.f. *var-na-mai*); to which Aiol. βόλλομαι and βόλλα=βουλή (will, council) seem to bear evidence; ου would thus arise fr. *o* by compensatory lengthening, in place of the lost *v*; √βoλ for \*Foλ corresponds to the Lat. *uel*, *uol* (in *uel-le*, *uol-t*), Sk. and origl. *var* (choose, will); ὄροβο-ς (vetch) bes. Lat. *eruo-m*, O.H.G. *araweiz*, cf. H.G. *erh/se*. For other exx. of this correspondence of sound *v*. G. Curt. Gr. Et.<sup>2</sup> p. 514 sqq. Dialectically β for origl. *v* occurs more often, e.g. Lakón. βέργον, βιδεῖν, for *Fέργον* (work), *Fiδεῖν* (see), origl. √*varg*, √*vid*; Lesb. Aiol. βρίζα (root), βρόδον (rose), for *Fρίζα*, *Fρόδον*, etc. Yet it is not unlikely that here (except in comb.

§ 65.  $\beta\rho=F\rho$ )  $\beta$  is practically only a character representing the  $v$ -sound instead of  $F$ .

Quite beside the ordinary rule we find  $\sigma\phi$ =earlier  $sv$  in pron. st.  $\sigma\phi\epsilon$ -,  $\sigma\phi\omicron$ - ( $\sigma\phi\epsilon\iota\varsigma$ , you,  $\sigma\phi\acute{\epsilon}$ -τερος,  $\sigma\phi\acute{\omicron}$ -ς, your)=Sk. and origl. *sva*-; in  $\sigma\phi\acute{\omega}$  (you two) for \* $\sigma F\omega$ , \* $\tau F\omega$ , fr.  $\sigma\acute{\upsilon}$ , Dôr.  $\tau\acute{\upsilon}$ , origl. *tu* (thou); here  $\sigma\phi$  arises, prob. early, for  $sp$ , in consequence of the aspirating force of  $s$  (v. sub. § 68); so, too,  $\sigma\phi\acute{\omicron}\gamma\gamma\omicron\varsigma$  bes.  $\sigma\pi\acute{\omicron}\gamma\gamma\omicron\varsigma$ ,  $\sigma\pi\omicron\gamma\gamma\iota\alpha$ , which corresponds in root to the Goth. *svamms*, st. *svamma*- (Lat. *fungus* is perh. borrowed fr. Gk.);  $sp$  here occurs exceptionally for  $sv$ , as takes place sometimes in Zend; in Hom.  $\phi\acute{\eta}$  (as) for \* $\sigma\phi\eta$ , cf. Goth. *svē* (as), the initial  $s$  has been lost (G. Curt. p. 387).

Origl.  $v$  is said to be= $\mu$  in  $\acute{\alpha}\mu\nu\acute{\omicron}\varsigma$  (lamb) for \* $\acute{\alpha}F\iota$ -νο-ς, fr. origl. *avi*-s, Gk.  $\delta F\iota$ -ς (sheep), and in other single instt. more or less doubtful (G. Curt. p. 521).

Still more doubtful is the change from  $v$  to  $\gamma$  (G. Curt., p. 527 sqq.).

On the assimiln. of  $v$  to other consonn. e.g.  $\tau\acute{\epsilon}\sigma\sigma\alpha\rho\epsilon\varsigma$ =\* $\tau\epsilon\sigma F\alpha\rho\epsilon\varsigma$ , \* $\tau\epsilon\tau F\alpha\rho\epsilon\varsigma$ , v. 'sound-laws.'

§ 66. Nasals.

1. Origl.  $n$ =Gk.  $\nu$  (cf. sound-laws for medial and final loss of origl.  $n$  in Gk.); e.g.  $\nu\acute{\epsilon}F\omicron\varsigma$  (new)=Sk. and origl. *návas*;  $\nu\alpha\acute{\upsilon}\varsigma$  (ship)=Sk. *nāus*, Lat. *navis*;  $\acute{\alpha}$ -νῆρ (man), st. *νερ*-=Sk. and origl. *nar*-;  $\acute{\epsilon}\nu\nu\acute{\epsilon}F\alpha$  (nine), Lat. *nouem*, Sk. and f.f. *návan*-;  $\sqrt{\nu\epsilon\kappa}$  in  $\nu\acute{\epsilon}\kappa$ -υς,  $\nu\epsilon\kappa$ -ρός (corpse)=Lat. *nec* in *nec-are*, Sk. *naç*, origl. *nak*; neg.  $\acute{\alpha}\nu$ =origl. and Sk. *an*-;  $\sqrt{\acute{\alpha}\nu}$ , origl. and Sk. *an* (blow) in  $\acute{\alpha}\nu$ -εμος (wind)=Lat. *an-imus*, cf. Sk. *an-ilás* (wind);  $\sqrt{\gamma\epsilon\nu}$  in  $\gamma\acute{\epsilon}\nu$ -ος (race),  $\gamma\acute{\iota}$ -γ(ε)ν-ομαι (become)=Lat. *gen*, origl. *gan*;  $\sqrt{\mu\epsilon\nu}$ , origl. and Sk. *man* (think) in  $\mu\acute{\epsilon}\nu$ -ος (mind, might)=Sk. *mán-as*; 3 pl. vb. -ντι (-νσι)=Sk. and origl. -*nti*, e.g.  $\phi\acute{\epsilon}\rho\omicron\nu\tau\iota$ ,  $\phi\acute{\epsilon}\rho\omicron\nu\sigma\iota$ =Sk. and origl. *bháranti*, etc.

Before gutturals in Gk. the nasal becomes guttural, origl. *nk*, *ng*, *ngh*=Gk.  $\gamma\kappa$ ,  $\gamma\gamma$ ,  $\gamma\chi$ ; bef. labials it is labial. Accordingly the radical nasal, origl.  $n$ , which occurs after the root in the case of certain present-forms, remains, as in  $\tau\acute{\epsilon}\mu$ -νω (I cut; cf. aor.  $\acute{\epsilon}$ -ταμ-ον), is  $\nu$  bef. dentt., e.g.  $\lambda\alpha\nu\theta$ -άνω (escape notice), cf.  $\acute{\epsilon}$ -λαθ-ον; it becomes  $\mu$  bef. labb., e.g.  $\lambda\alpha\mu\beta$ -άνω (take), cf.

ἐ-λαβ-ον; γ bef. gutt., e.g. λαγχ-άνω (get by lot), cf. ἐ-λαχ-ον. § 66. The same interchange is seen besides naturally in compds. where σνν- is changed to σνμ-, σνγ-, according to the quality of the following conson.

*Note 1.*—√γαμ in γάμ-ος (marry), γαμ-έω (marry), is, like Lith. √gam (*gim-ti*, am born, *pri-gim-tis*, nature, *gam-in-ti*, beget, furnish), a further fmn. fr. √γα (*γε-γα-ός*), developed early to γε-ν (the meang. 'beget' through that of 'marry'); μ is here not fr. ν in γε-ν. In γαμ-βρός (son-in-law) for \*γαμ-ρο-ς we conjecture a 'popular' etymology fr. γαμ-έω, through which an earlier \*γαν-ρο-ς=Lat. *gener*, i.e. \**gen-ro-s* (son-in-law), may have passed to \*γαμ-ρο-ς; cf. Lith. *žén-ta-s* (son-in-law), f.f. *gan-ta-s*, O. Bulg. *zēti* (id.), f.f. *gan-ti-s*, similarly fr. √gan; cf. § 75, 2, n.

*Note 2.*—ἄλλος (other)=Lat. *alius*, Goth. *alis*, we hold to be unconnected with Sk. *anyá-s* (other), with G. Curt., and see in it a fmn. fr. origl. pron. √ar. That such a root existed is proved by st.-fnative sf. *ra* (v. post). Corss. (Krit. Beitr. p. 295 sqq.) divides them thus: *a-lī-s*, *a-liū-s*, \**ā-lyo-s*, because he holds the *a* to represent pron. √a (dem. e.g. Sk. gen. sg. masc. nt. *a-syá*), *lī*, *lyo*, to be sff. *tā-lī-s*, *quā-lī-s*.

2. Origl. *m*. = Gk. μ, ν (the latter in termn.), e.g. st. με-, μο-, ἐμε-, ἐμο- (pron. pers. 1) = Lat. *me-*, Germ. *mi-* (in *mi-ch*, *mi-r*), Sk. and origl. *ma-*, thence -μ, pl. -μεν, Dôr. -μες, 1 sg. pl. vb. = origl. and Sk. -*mī*, -*māsi* (e.g. εἶ-μῖ = origl. *ai-mī*, Sk. *é-mī*; ἴ-μεν = Sk. and origl. *i-māsi*); μέσσο-ς (μέσος) = \*μεθ-γος (v. post, § 68, 1, e) = Lat. *mediu-s*, Sk. and origl. *mādhya-s*, Goth. *midji-s*; st. μήτηρ- (mother), Sk. and origl. *mātār-*; √μεν, μνα, origl. and Sk. *man* (think), in μν-μνή-σκω (remember), μέν-ος (mind, might) = Sk. and origl. *mānas*; μέθυ (intoxicating drink), Sk. and origl. *mādhū*, O.H.G. *mētu*; ἅμα (together, with), ὁμός- = Sk. *sama-s* (similar, like), *sama-m*, *samā* (ὁμοῦ), cf. Lat. *sim-ilis*, *sim-ul*, Goth. *sama* (same); √Feμ (ἐμέω) = Lat. *uom* in *uom o*, for \**uemo*, Lith. *vem* (1 sg. pres. *vem-iū*), Sk. and origl. *vam* (spue, 1 sg. pres. *vām-āmi*). Final *m* becomes ν, e.g. sign of acc. ν = origl. *m*, e.g. τό-ν = Sk. and origl. *ta-m*, cf. Lat. *is-tu-m*; ν = *m* as sf. of 1 pers. sing., e.g. ἔφερο-ν = Sk. and origl. *ābhara-m*.

§ 66. *Note.*—The *exx.* which are intended to prove medial *ν* to be a representative of origl. *m* (cf. Curt. Gr. Et.<sup>2</sup> p. 476 sqq.) are all doubtful. Thus e.g. *βαίνω* (go) fr. \**βαν-γω*, which must not be assigned to Sk. *√gam*, but to *√ga*, comes fr. the common formatives of the present st. *na* and *ya*; in *χθών* (earth), st. *χθον-*, bes. *χθαμαλός* (lowly, on the earth), cf. *χαμαί* (on the earth), Zend st. *sem-* (earth), O. Bulg. *zemya*, *zemlya*, Lith. *zėme* (earth), the *ν* seems to have penetrated inwards from the termn.: so, too, perh. st. *χιών* (*χιών*, snow) bes. Lat. *hiem(p)s*, Sk. *hima-s* (snow, cold), Zend st. *zim-*, *zima-* (winter, cold), O. Bulg. *zima-*, Lith. *žėmà* (winter).

§ 67. *r-* and *l-*sounds.

Origl. *r*=Gk. *ρ*, *λ*.

Gk. *ρ*=origl. *r*, e.g. in *√ρνθ* (be red), Sk. and origl. *rudh*; suff. *-po*, Sk. and origl. *-ra*, both in *ἐ-ρνθ-ρός* (red)=Sk. *rudh-irá-s*, Lat. *ruber*, i.e. \**rub-ro-s*, origl. *rudh-ra-s*; *√ἀρ* in *ἀρ-ώ* (plough), *ἄρ-οτρον* (a plough), cf. Lat. *ar-o*, *ar-atrum*, Goth. *ar-yan*, Lith. *ár-ti*, Scl. *or-ati* (plough); *√ὄρ* in *ὄρ-νυμι* (rise), Lat. *or*, Sk. *ar* in *ῥ-νόμι* (orior); *√ρύ*, Sk. and origl. *sru*, flow, etc.

Gk. *λ*=origl. *r*, e.g. in *√λυκ* in *λευκ-ός* (white), Lat. *luc*, Germ. *luh*, Sk. *ruk*, origl. *ruk* (shine); *√πολ*, *πλε*, Sk. and origl. *par* (fill), in *πολύς* (many), Sk. *purús* for origl. *parus*, *πίμ-πλη-μι* (fill); *ἐ-λαχύς* (small)=Sk. *laghús*; *δολιχός* (long), Sk. *dīrghás*, Zend *dareghō*, origl. *dargha-s*; *ὅλος* (whole) for \**όλFos*, Lat. *sollus* for \**soluos*, Sk. *sárva-s*, etc.

§ 68.

## SOME IMPORTANT SOUND-LAWS.

### MEDIAL.

#### 1. Assimilation.

a. Perfect assimiln. of a preceding to a following sound; e.g. of *s* to *ν*, *μ* following, *ἐννυμι* (clothe)=\**Feσ-νυμι*; Aiol. *ὄρεννος* (mountainous)=\**ὄρεσ-νός* fr. *ὄρος* (mountain), st. *ὄρες*-sf. *-νο*; Aiol. *ἔμμι* (am)=\**ἐσ-μι*; *εἰ-μί*, *ὄρει-νός*, represent the double cons. by compensatory lengthening. Not unfrequently consonants which were afterwards lost are preserved in



such assimilns., e.g. *περίρρυτος* (sea-girt) for \**περι-σρυ-το-ς*,  $\sqrt{\rho\nu}$  § 68. (flow, *πέF-ω*) for \**σρυ*, Sk. and origl. *sru*, Germ. *stru* (with inserted *t*), etc.; *ἄρρηκτος* (unbreakable, unbroken) for \**ἄ-Fρηγ-το-ς*,  $\sqrt{F\rho\alpha\gamma}$  (*Φρήγ-νυμι*, break, *Φρήξις*, rent, for \**Φρηγ-τι-ς*); *φιλομειδής* (freely smiling) for \**φιλο-σμει-δης*,  $\sqrt{\mu\iota}$  for \**σμι*, Sk. and origl. *smi*, O. Bulg. *smi*, etc.

The assimiln. of momentary labb. to following  $\mu$  is well known; e.g. *γράμμα* (writing) for \**γραφ-μα* (*γέ-γραμμαι* for \**γεγραφ-μαι*, 1 pf. med. fr. *γράφ-ω*, write), etc., and the assimilns. which perh. occur only in compds., e.g. *συλλέγω*, *συρρέω*, and the like.

In the commonest of these cases, i.e. in assimiln. of all the dentals (including  $\nu$ ) to a following *s*, the double *s* so produced was not tolerated in the later form of lang., even when *s* was medial and followed a short vowel: only the archaic (Hom.) lang. shows such forms as *ποσσί* fr. \**ποδ-σι* (loc. pl. fr. st. *ποδ-*, foot); throughout *s* is the only trace of the process of assimiln., not seldom (especially in nom. sing. and where *ντ*, *νδ*, *νθ*, were originally existent) accompanied by compensatory lengthening of precedg. vowels (cf. § 28), in which cases, perh. not common, we must assume an assimiln. of the  $\nu$  by resolution into a vowel-sound. This is a well-known sound-law, to which belong such exx. as loc. pl. *σώμᾱ(τ)-σι*, *πο(δ)-σι*, *κόρυ(θ)-σι*, *δαίμο(ν)-σι*. The *s* which produces the assimiln. is often unorigl., i.e. has arisen, through the action of a previous sound-law (*v. infr.*), from  $\tau$ , e.g. *πέσις* (feeling) fr. st. *πενθ-* (cf. *πένθος*, grief) and suff. *-σι-ς* fr. *-τι-ς*. Compensatory lengthening occurs in such cases as *εἰδώς*=\**FeιδFot-ς*, *δαίμων*=\**δαιμον-ς*, *φέρουσι*=\**φερονσι* fr. *φέροντι*;  $\nu$ +dent. must both be lost before *s*, e.g. *σπείσω* fr. \**σπενδ-σω*, *πείσομαι* fr. \**πενθ-σομαι*, *τιθείς* fr. \**τιθεντ-ς*, *χαρίεις* fr. \**χαρι-Fεντ-ς* (*φέρων*, however, fr. \**φεροντ-ς*, *v. § 28, 3*; *χαρίεσσα* fr. \**χαριFετ-γα* [*v. e.*], without compensatory lengthening, because no  $\nu$  was originally there).

Moreover, in this place belong the cases in which the assimiln. takes place together with the loss of the former consonant, e.g.

§ 68. διδάσκω (learn) for \*διδαχ-σκω, cf. διδαχ-ή (teaching); λάσκω (cry out, speak) for \*λακ-σκω, cf. ἔ-λακ-ον; ἔψευκα for \*ἐψευδ-κα fr. ψεύδ-ω (tell lies), etc.

b. Complete assimiln. of a following to a preceding sound.

This kind of assimiln. is, like the former, an especial favourite in the Aiol. dialects, whilst elsewhere, instead of the double consonn., compensatory lengthening (§ 28) of the preceding vowel, or transposn. of *v* and *y* generally occurs. Thus *F*, *y*, and *σ* become assimilated to a preceding liquid, *F* and *y* sometimes to other sounds also, viz. *σ*, *y*, to *τ*, *δ*; e.g. γόννος=γουνός =\*γον*F*-ος, gen. fr. st. γουν- (knee); st. πολλό- for \*πολ*F*ο-, a further fm. through *ο*, origl. *α*, fr. st. πολύ- (many), origl. *par-u-*; ἵππος (horse) fr. \*ἵπ*F*ος, ἱκ*F*ος (cf. sideform ἵκκος), origl. *ak-va-s*; κτένω (kill)=κτείνω=\*κτεν-γω; χέρρων=χείρων (worse) =\*χερ-γων, etc. In the case of *λy* the assimiln. has been retained in other diall.; στέλλω (send)=\*στελ-γω; ἄλλος (other) =\*άλγος, Lat. *alius*; except ὀφείλω (owe) fr. \*ὀφελγω, and perh. a few others; πτίσσω (peel)=\*πτισ-γω (ἔ-πτισ-μαι), cf. Lat. *√pis* in *pinso*, *pis-tor*, Sk. *piś* (e.g. *pi-nás-ti*, Lat. *pinsit*); this does not often happen, *s* usually is lost, and also *y* at a later period, cf. supr. § 65, 1, a, e; πόδ-εσσι fr. \*ποδεσ*F*ι, -σ*F*ι=origl. -*sna*, is termn. of loc. pl., ποδε- is the noun-st. fr. earlier ποδ- (foot); in this case also the later lang. has only one *σ*, e.g. πόλεσι, γλυκέσι, which never disappears from between the two vowels, because it stands for *σσ*. τέτταρες, τέσσαρες (four), fr. \*τετ*F*αρες (f.f. *katvāras*), and thence \*τεσ*F*αρες is an ex. of *F* assimild. to a mom. sound. *ττ* for *τυ*, *θy*, *κy* (apparently *γγ*, v. infr. e, β), *χy* is produced in the same way, since *κy* first became *τυ*, as this sound-change occurs in many langg., and the aspiration (of *θy*, *χy*) becomes lost before *y*.

Thus, e.g. ἐρέτω (I row) fr. \*ἐρετ-γω, cf. ἐρετ-μός (oar); ἥττων (less, worse) fr. \*ἥtyw for \*ἥκ-γων, cf. ἥκ-ιστος (superl.); ἐλάττων (less, smaller) for \*ἐλαtyw, and the latter for \*ἐλαθ-

γων, \*ἐλαχ-γων, cf. ἐλάχ-στος and ἐλαχύς (little). These § 68. forms in ττ have by-fms. in σσ (v. infr. e, β), and have not arisen through an unparalleled change of σσ into ττ, but one produced by a divergence of diall. in the treatment of the same fund-fms. as underlie the fms. in σσ. Accordingly, since e.g. πτίσσω (v. supr.) stands for \*πτισ-γω, no *t*-sound ever was in existence here, and so no parallel fm. \*πτιττω occurs.

δδ, initial δ, for δγ, γγ, a sound which did not become δγ until late, is likewise dialectic; e.g. Boiôt. Lak. Δεύς for \*Δγευσ (Ζεύς); Boiôt. σφάδδω for \*σφαδ-γω fr. \*σφαγ-γω (σφάζω, cut the throat), √σφαγ (ἐσφάγ-ην); σαλπιδδω for \*σαλπιδ-γω, \*σαλπιγ-γω (σαλπίζω, trumpet); st. σαλπιγ- (σάλπιγξ, σάλπιγγος (trumpet). This also is the explanation of Att. Ιόν. ἔρδω (do) fr. √Φεργ (pf. ἔοργα, i.e. Φέφοργα, Φέργο-ν, work), Goth. *vark*, for \*Φερδ-γω, \*Φεργ-γω, from which we ought to have found \*Φερζω acc. to the rule, but this form seems to have been avoided on account of the unpleasant combination ρζ, cf. Ιόν. Φρέζω, Boiôt. Φρέδδω=\*Φρεγ-γω, which differs from \*Φερδ-γω merely in transposition from Φεργ to Φρεγ. So also δ fr. δγ is produced in place of origl. γ (v. supr. § 65, c, n.).

The same assimiln. occurs, except in archaic remains such as ἔρσω, ὠρσα, χέρσος (χέβρος), θάρσος (θάβρος), πέφανσαι (which perh. is hardly authenticated), beside medial combinations, as λσ, ρσ, νσ, μσ, e.g. Aiol. ἔστελλα=ἔστειλα=\*ἔστελ-σα; Aiol. ὀρράτω=ὀρσάτω; Aiol. ἐγέννατο=ἐγεινατο=\*ἐγενσατο; Aiol. ἐνεμμα=ἐνειμα=\*ἐνεμσα; thus ἔφηνα stands for \*ἐφαν-σα ἡγγειλα for \*ἡγγελ-σα, etc. Thus χήν (goose), gen. χην-ός fr. \*χεν-ς, \*χενσ-ος, cf. Lat. (*h*)ans-er, Sk. hā-sas, O.H.G. st. gansi-, Lith. žąsī-s, O. Bulg. gąsi; μήν (month), Ιόν. Aiol. μείς, gen. μην-ός fr. \*μεν-ς, cf. Lat. mens-is, Sk. māś- (origl. mā-nt-, pres. part. act. √ma, measure); ὀλλυμι (destroy) stands for \*ὀλ-νυμι.

c. An assimiln. of preceding to following sounds. It is well known that τ and σ can be preceded only by mute mom. sounds (λεκ-τός, λέκ-σις, i.e. \*λεγ-σις, √λεγ), δ by none

§ 68. but sonant mom. sounds (γράφ-δην, √γραφ), θ by none but aspp. (λεχ-θῆναι, √λεγ).

Before *ν* labb. pass into their nasals, e.g. σεμ-νός (awful) for \*σεβ-νος, cf. σέβ-ομαι (I dread), yet they are found, e.g. ὕπ-νος (sleep), in opposition to *som-nus* (\*sop-nus).

Bef. labb. *ν* notably passes into the lab. nasal *μ* (e.g. ἔμ-πειρος for \*ἐν-πειρος), bef. gutt. into the gutt. nasal *γ* (e.g. συν-καλέω for \*συν-καλεω), cf. § 66, 1.

Bef. *μ* the dentt. τ, δ, θ, often pass into their spirants, e.g. ἦνυσ-μαι fr. ἀνύτ-ω (bring to pass, finish), πέ-πεισ-μαι for \*πε-πειθ-μαι, etc.; yet Ἰόν. ὀδ-μή occurs beside later ὀσ-μή (smell), √ὀδ; ἴδ-μεν (we know) bes. ἴσ-μεν; ἀριθ-μός, ἀτ-μός, κεκορυθ-μένος, and others, do not show the change to σ.

Further, the change of gutt. κ, χ, before *μ* into *γ* is well known, e.g. δόγ-μα, √δοκ; τέ-τυγ-μαι, √τυχ; yet χ often remains, e.g. δραχμή. This law was likewise incompletely applied in the earlier (Ἰόν.) langg., e.g. ἵκ-μενος, ἀκαχ-μένος.

Sometimes nasals seem to change preceding mom. sounds into aspp., e.g. λύχ-νος (light, torch) fr. √λυκ (λευκ-ός, white), origl. ruk; ἀκ-αχ-μένος (sharpened, pointed), redupl. √ἀκ (be sharp); cf. ἀκ-ωκ-ή (point), and others.

The same influence is exercised by ρ, λ, in many cases, e.g. suff. -θρο, -θλο, bes. origl. tra, Zend thra (here the spirants have the force of aspp.), e.g. βά-θρο-ν (base), √βα (go); κλει-θρον (lock), fr. κλείω, κληῖω, κλήω (lock); θέμε-θλον (ground-work), etc., bes. ἄρο-τρο-ν (plough)=Lat. arā-tru-m (ἀρόω, I plough), etc.

Before *ι* in stem- and word-formative particles (except in Dór. dial.) τ is changed to σ, e.g. φησί (he says), Dór. φασί; the -τι of 3rd pers. sing. is kept in ἐσ-τί (he is); the abstracts in -σι-ς for -τι-ς, e.g. φά-σις, in Hom. and tragg. φά-τις (speech); πέψις (cookery, √πεπ, f.f. kak, cook) fr. \*πεπ-τι-ς, f.f. kak-ti-ς; suff. ya, Gk. -ιο, forming -tya, with stems ending in *t*-, *ta*- (the stem-termn. *a* of *ta* being lost, which is regularly the case bef. suff. ya), Gk. -τιο, and hence -σιο, e.g. fr. πλοῦτο-ς (wealth) is

fm̄d. Dōr. πλούτ-ιο-ς, and hence πλούσιο-ς (rich); fr. ἐνιαυτό-ς § 68. (year), Dōr. ἐνιαύτ-ιο-ς, and hence ἐνιαύσιο-ς (yearly); st. γεροντ- (n. sing. γέρων, old man) with sf. γα, Gk. ια, makes γεροντία, and thence γερονσία (senate); f.f. (ā)vikati, Dōr. Φίκατι, εἴκατι (perh. fr. \*ἐΦίκατι), Att. εἴκοσι (twenty); from Dōr. φέροντι, τιθέντι (3 pl.), f.f. *bharanti*, *dadhanti*, come \*φερονσι, \*τιθενσι, and thence by rule (v. supr.) φέρουσι, τιθεῖσι (Iōn.), etc. Yet in Att. and Iōn. is found φά-τι-ς (speech), √φα, and the like.

Also bef. *υ* this change of *τ* to *σ* sometimes takes place, thus in σύ for Dōr. τύ (thou), cf. Lat. and Lith. *tu*; suff. -συ-νη, f.f. -*tu-nā*, further fm̄n. of common abstract sf. -*tu* (-*tv-a*).

d. An assimiln. of following to preceding sounds. *y* in the combn. *dy* is so similar to the preceding dent. sonant *d*, that it becomes a dental sonant spirant (French or Polish *z*), *dy* thus becomes *dz* (acc. to Slav. or French pronuncn.), written ζ, e.g. Ζεύς fr. \*Δγευς=Sk. *dyāus* (√*dyu*=*div*), cf. early Lat. *Diou-is*; Aiōl. ζά=\*δγα for διά (through); ἔξομαι (sit, seat myself)=\*σεδ-γομαι, √ἐδ=σεδ; σχίζω (split) for \*σχιδ-γω, √σχιδ; τρά-πεζα (table) for \*τετρα-πεδ-γα (four-footed), cf. Lat. st. *ped*- (*pes*, *ped-is*, foot), etc.

Here belongs the aspiration of origly. unaspirated consonn. through influence of preceding prolonged-(liquid) sounds. In Greek this influence is especially exercised by *s*, cf. Sk. § 52: i.e. \*σχιδ-γω, σχιδ-η (splinter), √σχιδ, for and bes. √σκιδ in σκιδ-νημι (divide, scatter), cf. Lat. *scid* in *scindo*, Goth. *skid* in *skaida* (cut), Sk. *khiḍ*, i.e. origl. *skid*, in *khi-nā-d-mi* (slit); πάσχω (suffer) for \*πα-σχω or perh. \*παν-σχω, √πα in πα-θ (ἐ-παθ-ον), and πε-ν, πέν-ομαι (endure, tire myself), further formations in *θ* and *ν*; the *σ* sometimes disappears before the aspp. which it has called into existence, e.g. ἔρχομαι (come), for \*ἐρ-σχομαι, ἐρ-σκομαι, √ἐρ (come, go), cf. Sk. *rĥkḥāmi*, also *ārĥhāmi*=\*ἐρχω, origl. 1 sing. act. *ar-skā-mi*, med. *ar-ska-mai*; κριθή (spelt) for \*χριθη (cf. § 64, sub fine, and 2 infr.), and this for \*χρισθη, \*χριστη, cf. O.H.G. *gērsta*, etc.

§ 68. The nasals also seem to have thîs aspirating effect sometimes, e.g. Boiôt. -*νθι* for -*ντι*, 3 p. pl. act. vb.; ὀμφ-ή (voice) for \**Φομπ-η* fr. √*Feπ*, origl. *vak* (speak); ἐγχ-ος (nt. spear) fr. √*άκ* (be sharp), cf. ἄκ-οντ- (ἄκων, javelin).

Perh. ρ, λ, are the cause of aspiration in τρέφ-ω (nourish), which thus by assumption may be for \**τερφω* bes. *τέρπω* (sate, delight, cf. *τέρπεσθαι* ἐδητύος), Sk. *tarp* (be sated, delighted), Lith. *tàrp-ti* (thrive); πλάθ-ανος, πλαθ-άνη (flat cake), bes. πλατ-ύς (broad), Lith. *plat-ùs*, etc., πλάτ-η (plate, oar-blade). Concerning 'unorigl. aspiration,' cf. G. Curt. Gr. Et.<sup>2</sup> p. 439 sqq.

e. Mutual assimilation (complete or partial) of two sounds, each affecting the other.

α. γγ becomes ζ=δζ (v. d supr.), as γ bef. γ becomes δ, γ after δ becomes ζ, e.g. κράζω (cry), i.e. \**kradzō* fr. \**κραδγω*, and this fr. \**κραγ-γω*, √*κραγ*, cf. κέ-κράγ-α; ἄζομαι (dread) fr. \**άγ-γομαι*, cf. ἁγ-ιος (holy); μέζων, μείζων (greater), the latter having, moreover, γ transferred to the preceding syll. (cf. § 26), fr. \**μεγ-γων*, cf. *μεγ-άλη*, *μέγ-ας* (great), etc.

In νίζω (wash) bes. χέρ-νιβ-ος (χέρνιψ, water for handwashing), νίπτω (wash)=\**νιβ-τω*, the earlier root-fm. *nig*, Sk. *niḡ*, is retained (cf. § 63). Λάζομαι (grasp) bes. λαμβάνω (take) is obscure, unless it be the unique ex. of ζ=βγ, formed perh. on the analogy of the common fms. in -αζω, -αζομαι.

β. τγ, θγ, κγ, χγ, become σσ; in τγ and θγ, γ perh. became the dent. mute spir. s, after dental mutes, whereby arose τς, θς, then the preceding mute dentt. assimilated themselves to this σ; because σσ=τγ, θγ, also in Dôr., we must not assume that τγ (θγ) passed next into σγ, as τι into σι (v. sup. c), and this σγ into σσ by rule (b), for in Dôr. τ remains before ι; κγ, χγ, became firstly *ty*, *thy*, as of course gutt. so often pass into dentt. bef. γ, and then these sounds became σσ in the way above described; e.g. ἐρέσσω (row) fr. \**ἐρετ-γω*, cf. ἐρετ-μός; κρέσσω, κρείσσω (stronger, better), with transposn. of γ (cf.

μέζων, μείζων), fr. \*κρετ-γων, cf. κράτ-ιστος; κορύσσω (I arm) § 68. fr. \*κορυθ-γω, cf. κε-κόρυθ-μαι; βάσσω for \*βαθ-γων, cf. βαθ-ύς (deep); πίσσα (pitch) = \*πικ-γα, cf. ρία, ριc-ίς; ἥσσω (less, worse) for \*ήκ-γων, cf. ήκ-ιστος; ἐλάσσω (smaller) for \*ἐ-λαχ-γων, cf. ἐ-λάχ-ιστος, ἐ-λαχ-ύς, Sk. lagh-ús.

Not unfrequently σσ has apparently arisen from γγ: in these cases thus much is clear, that in the older state of langg. a fundamental κ is always found still preserved, and that this κ was not softened to γ till a later period, after κγ had been incorporated into a fixed group of sounds; e.g. πλήσσω (strike) bes. πέπληγον, πληγή (blow), but origl. √πλακ, cf. πλάξ, πλακ-ός (flat, plate), Teut. *flah*, Lith. *plàk-ti* (strike), whence *plók-szias* (flat, adj.); φράσσω (inclose) = \*φρακ-γω, but ἐφράγ-ην with softening of κ to γ, cf. Lat. *farc-io*, etc. Cf. supr. § 62.

Note 1.—βράσσω must be assigned to βραχ-ύς (short), not to βραδ-ύς (slow); so G. Curt. Gr. Et.<sup>2</sup> p. 600.

Note 2.—Likewise we mentioned in § 62, above, that κγ is still preserved in cases such as πέσσω (cook) bes. πέψω, πέπων (ripe); ὄσσα (voice) bes. ἔπος; ὄσσε (eyes) and ὄσσομαι (see) bes. ὄψομαι (\*πεκ-γω, Sk. *paḥ*, Lat. *coc*; ὄσσα = \*Φοκγ, √Φεκ, √Φοκ, origl. *vak*; ὄσσε = \*ὀκ-γε, ὄσσομαι = \*ὀκγομαι, √ὀκ, origl. *ak*, cf. *oc-ulus*, Lith. *ak-ùs*).

f. Apparent insertion of a consonant between two concurrent consonants. νρ and μρ, also μλ, as in other langg. (e.g. French *gen-d-re* fr. Lat. *gener*, *generum*, \**genrum*; *nombre* fr. Lat. *numerus*, \**numrus*; *humble* fr. Lat. *humilis*, \**humlis*), become νδρ, μβρ, μβλ, i.e. *n* and *m* thereby are joined with follg. *r* and *l*, in an easier combination, because they preserve the extremities of momentary consonn.; *n* becomes *nd*, *m* becomes *mb*, to which the subsequent *r*- or *l*-sound was merely lightly joined; e.g. ἀν-δ-ρ-ός for \*ἀνρ-ος, gen. st. ἀνερ- (man); μεσ-ημ-β-ρία (mid-day) for \*-ημ-ρια, cf. ἡμέρα (day); ἄ-μ-β-ροτος (deathless) for \*ἄ-μρο-τος, √μρο = Lat. *mor* (*mori*); μέ-μβλω-κα (pf.) for \*με-μλω-κα, fr. μολ-εῖν (go, come), √μολ, μλο; in βροτός the μ has fallen away from bef. β, βροτός stands for

§ 68. \**μβροτος* (preserved in *ἄ-μβροτος*), and this for \**μρο-τος*, past part. from *√mar*, *mra* (mori), cf. Sk. *mar-ta-s* (a mortal, man, Rigved. I. 84, 8, acc. to Kuhn, Beitr. iii. 236); the same process takes place in *βλίττω* (cut honey) for \**μβλιττω*, fr. \**μελιτ-γω*, st. *μελιτ-* (*μέλι*, honey); *βλώσσω* (go, come) for \**μβλωσσω* fr. \**μλωσσω*, *√μολ* in *μολ-εῖν*, etc.

*Note.*—In *πτόλις*, and such like cases, bes. *πόλις* (city), cf. Sk. *puram*, *purī*, *√par* (fill); *πτόλεμος* bes. *πόλεμος* (war), cf. *πελεμίζω* (brandish), and Lat. *pello*; *πτίσσω* (peel)=\**πτισ-γω* for \**πισγω*, *√πις*=Lat. *pis* (pinso), Sk. *piś*, *πτ* stands for *π* without any visible cause. They seem to be dialectic fms.

g. The ejection of *s* from between consonn., e.g. *τέτυφ-(σ)θε*, is well known.

Loss of *s* between vowels is treated of § 65. In like cases *τ* also disappears, but not so often; e.g. *κέρωσ* for *κέρατ-ος* (gen. sing. st. *κερατ-*, horn); *φέρει* (3 sing. pres. act.) fr. \**φερε-τι*, origl. *bhara-ti*. The dent. nasal also is subject to similar decay in known cases, e.g. *μείζους* for *μείζον-ες* (n. pl. masc. fem. st. *μείζον-*, greater).

h. Transposition, as in *θάρσος* bes. *θράσος*, *δέδορκα* bes. *ἔδρακον*: it is not easy to ascertain which arrangement is here the primitive one.

*Note.*—*τέ-θνη-κα* bes. *ἔ-θαν-ον*, and the like, are primitive deviations from root-fms., and must not be treated according to Gk. sound-laws. Cf. 'root-formation.'

2. Dissimilation. Here belong the known changes of mom. dent. bef. *τ* and *θ* to *σ*, so as to facilitate pronunciation; this change is found in Eran. Lat. and Sclavo-germ. also, e.g. *ἄνυσ-τός* fr. *ἀνύτ-ω*; *ἄσ-τέον* fr. *ἄδ-ω*; *πεισ-θῆναι* fr. *πείθ-ω*; *πισ-τός* for \**πιθ-τος*, etc.

Sometimes two consecutive aspp. are avoided by changing the former or latter into an unasp. conson., e.g. *ἐ-τέ-θην*, *ἐ-τύ-θην*, for \**ἐ-θε-θην*, \**ἐ-θυ-θην*, *√θε*, *θυ*, cf. *τί-θη-μι*, *θύω*; *σώ-θη-τι* for \**σω-θη-θι*, the termn. of 2 p. sing. imp. is *-θι*, origl. *dhi*, cf.



κλῦ-θι, origl. *kru-dhi*, etc. This change scarcely ever takes § 68. place except in the case of *θ* (in *φ* and *χ* perh. only in compds., e.g. ἀμπ-έχω, ἐκε-χειρία).

For a similar phenomenon in the case of root-fms., which origly. began and ended with aspp., v. supr. § 64, sub fine).

Moreover, the attempt to avoid pronouncing similar sounds close together causes the contraction of two similar or like consonn. into one, by means of evaporation of the vowel that lies between them, e.g. τράπεζα (table) for \*τετρά-πεζα (four-footed); τέτραχμον for earlier τετρά-δραχμον (four-drachm piece); ἀμφορεύς (two-handled jug) for earlier ἀμφι-φορεύς, etc.

3. The aspirates. Whenever by sound-laws aspp. which terminate a root become unasp. consonn., the aspiration falls back upon the *τ* which begins the root; the same change takes place when *θ* follows upon the root-termn., notwithstanding that the asp. remains before *θ*, e.g. st. τριχ-, cf. τριχ-ός, but \*θρικ-ς, i.e. θρίξ (hair); τρέχ-ω (run), but θρέξομαι; τύφω (fume), but θύψω; τρέφ-ω (nourish), but ἐθρέφθην, etc. In cases like the last mentioned the aspiration before the *θ* appeared to the Greek instinct for language to be caused by it (the *θ*), and similarly also where the aspiration occurs in the case of e.g. *π*, *β*; accordingly the sound that ended the root was only characterized as aspirate by the retrogression of the aspiration upon the initial conson.

For the law by which, in the case of roots which origly. began and ended in aspp., the initial consonn. lost their aspiration, v. supr. § 64, sub fine.

4. Law of Reduplication. Of two initial consonn. the former only was admissible into the syll. of redupln.,—hence the aspp. are redupld. through their first element alone (*χ*, i.e. *kh*, through *κ*; *θ*, i.e. *th*, through *τ*; *φ*, i.e. *ph*, through *π*)—e.g. ἵ-στη-μι (set), i.e. \*σι-στη-μι for *sti-stā-mi*; γέ-γραφ-α (have written) for \*γρε-γραφ-α; πέ-φν-κα (have been born) for \*φε-φν-κα;

§ 68. *τι-θη-μι* (place) for \**θι-θη-μι*; *κί-χρη-μι* (lend, borrow) for \**χι-χρη-μι*, and this for \**χρι-χρη-μι*, etc.

In the case of more consonantal combinations, the first consonant also falls away, so that instead of redupln., only a vowel appears, e.g. *ἔ-γνω-κα* (have learnt) for \**γε-γνω-κα*; *ἔ-κτον-α* (have killed) for \**κε-κτον-α*, etc. Cf. Sk. redupln., § 59.

§ 69.

#### TERMINATION.

The only consonn. tolerated *in fine* in Gk. were *ς* and *ν* (generally fr. *μ*; this is also the case in the N. European langg. of the Teut. stem), e.g. *πόσι-ς*, origl. *pati-s*; *πόσι-ν*, origl. *pati-m*; and further *ρ* also, e.g. *πάτερ*, voc. f.f. *patar*, n. sing. *πατήρ*, f.f. *patars* (*κ* is found only in *ἐκ*, shortened fr. *ἐξ* 'out,' and in *οὐκ* 'not,' which likewise is prob. a shortened fm.). Other conson. were either cast off, or changed into *ς* or *ν*.

Thus the frequent final *t* of Indo-Eur. is thrown off in Gk. (cf. Lat. *nouō* fr. *nouōd*, origl. *navāt*, abl. sing.), or changed to *ς*, e.g. *τό* (the, neut.), Sk. and origl. *ta-t*, Lat. (*is*)-*tu-d*, Goth. *tha-t-a*; *ἔφερε* (3 sg. impf.), Sk. and origl. *ābharat*; *ἔφν* (3 sg. aor.), Sk. *ābhūt*; *ἔφερον* (3 pl. impf.), origl. *abharant*; *φέρων* (acc. sg. neut. pres. part. act.) for \**φεροντ*; *τέρας* (wonder, sign) for \**τερατ*, cf. gen. *τέρατ-ος*; *εἰδός* (neut. pres. part. act. 'knowing') for \**εἰδFοτ*, cf. gen. *εἰδός-ος*, etc. In consequence of loss of final *ι*, *θ* became final; when this occurred, *θ* also became *ς*, e.g. *δός* (give) fr. \**δοθ* for \**δο-θι*, origl. *da-dhi* (imper. aor. *√δο*, origl. *dā*, dare). *δ* drops off: *παῖ* (voc.) for \**παιδ* (n. sg. *παῖς*, child); so also *κ* in *γύναι* (voc. woman) for \**γυναικ* (cf. e.g. gen. *γυναικ-ός*); *κτ* in *ἄνα* (voc.) for \**ἄνακτ* (*ἄναξ*, gen. *ἄνακτ-ος*, lord), *γάλα* (n. acc. milk) for \**γαλακτ* (e.g. gen. *γάλακτ-ος*), etc. From *ντ* only *τ* is lost, e.g. *γέρον* (voc. fr. n. *γέρων* for \**γεροντ-ς*, gen. *γέροντ-ος*, old man) for \**γεροντ*.

The final *m* so common in Indo-Eur., esp. as sign of acc. and element of 1st sing. of vb., is usually replaced by *ν* in Gk., e.g. *πόσι-ν*, Sk. and f.f. *pāti-m*; *νέFo-ν*, Sk. and f.f. *nāna-m*; *ἔφερο-ν*

(1 sing.), f.f. and Sk. *ābhara-m*, etc. More rarely it coalesced § 69. with the precedg. vowel; this is probably the reason why precedg. *a* was lengthened, and hence also in the above lang. it remained as *ā*, and did not change into *ε*, e.g. *πάτερ-α* = \**πατερ-ā* fr. \**πατερ-αν*, f.f. *patar-am*; *ἔδειξα* (1 sg. aor.) = \**ἐ-δεικ-σā*, f.f. of termn. *-sa-m*, cf. Sk. *ā-dik-śam*; *δέκα*, cf. Lat. *decem*, Sk. *dāśan-*, etc.

Where there are more than one consonn. of which *s* is the last, the last *s* is cast off regularly, in the n. sing. generally, with compensatory lengthening, e.g. *φέρων* for \**φεροντ-ς*, *μήτηρ* for \**μητερ-ς*, *ποιμήν* for \**ποιμεν-ς*, *εὐμενής* for \**εὐμενες-ς*; yet *s* is retained also, as e.g. in *τιθείς*, *διδούς*, etc., fr. \**τιθεντ-ς*, \**διδοντ-ς*, and, in known cases, the foregoing sounds also, e.g. *φάλαγξ* (gen. *φάλαγγ-ος*, phalanx), *λύγξ* (gen. *λυγκ-ός*, cough), *φλόξ* (gen. *φλογ-ός*, flame), *ὄψ* (gen. *ὀπ-ός*, voice); even *ἔλμινς* for \**ἐλμινθ-ς* (gen. *ἔλμινθ-ος*, intestine worm), *πέριινς* for \**περινθ-ς* (gen. *περίρινθ-ος*, hamper), *ἄλς* (gen. *άλ-ός*, salt), which end in displeasing combinations.

The well-known *ν ἐφέλκυστικόν* is no relic of an earlier state of the lang., but a peculiar and late phenomenon in Gk., e.g. *ἔφερε-ν*, Sk. and f.f. *ābharat* (3 sg. impf.); in these cases the *ν* does not appear, therefore, until the origl. *t* had already been lost, and the feeling for lang. had become accustomed to treat the form as ending in vowel; *φέρουσι-ν*, Sk. and f.f. *bhāranti* (3 pl. pres.); *ποσσί-ν*, f.f. *pad-svi* (loc. pl.).

On the 1st pers. pl. of the vb. this *ν* has taken firm hold; the f.f. of this termn. is *-masi*, hence rose *-mas*, which is kept in Dôr. *-μες*; through the loss of final *s*—which occurs here and there even in Gk. (in Lat. it is notoriously common), e.g. in *οὕτω* bes. and for *οὕτως* (thus)—fr. *-μες* arose \**-με*, and upon this was grafted *ν*, at first prob. ephelkustik, and thus was produced *-μεν*, e.g. Sk. and origl. *bhārāmasi*, hence Sk. *bhārāmas*, Gk. (Dôr.) *φέρομες*, \**φερομε*, *φέρομε-ν* (we must not think of a change of *s* to *n* in this case, any more than elsewhere throughout the range of the Indo-Eur. lang.).

## § 70.

## CONSONANTS IN LATIN.

The table of consonn. is to be found in § 30.

The Lat. lang. is esp. characterized by lack of the aspp., which were represented by the corresponding unaspirated sonants, and by unorigl. spirants *f*, *h*; the latter in such a way that *f* (repres. by *b*, in medio) may stand for any origl. asp., *h* almost exclusively=origl. *gh*.

*k* (written *c*, *q*) remains always unchanged, but here and there drops away in initio; it does not become *p* or *t*, as in the other Indo-Eur. langg. The origl. spirants *y*, *s*, *v*, are generally retained, though *s* very often passes into *r*, and *y* and *v* often drop out, and are interchanged with *i* and *u*.

The consonn. are subject to numerous sound-laws: assimilation; dissimilation; change from *t* to *s*; from *s* to *r*; medial, initial, and final loss (the latter in a still higher degree in archaic Lat.)—all remove the consonantal system of Lat. widely from the origl. condition of the Indo-Eur. lang.

## § 71.

## EXAMPLES.

Origl. mom. mute unaspirated consonn.

1. Origl. *k*=Lat. *k*, i.e. *c*, *q*. Origl. *k* often attaches to itself a *v*, by a sound-law not yet understood (cf. Goth.). The written character, with a few archaic exceptions, represents *k* by *c*; before *u* (when other vowels follow=*v*) *k* is represented by its equivalent *q* (at an earlier period also before the *u* which forms the syll., e.g. *pegunia*), e.g.  $\sqrt{coe}$  in *coc-tus*, *coqu-o* (cook), origl. *kak*, cf. Gk.  $\pi\epsilon\pi$ , Sk. *paṭ*; *quinque* (five), origl. *kankan*, cf. Gk.  $\pi\acute{\epsilon}\nu\tau\epsilon$ ;  $\sqrt{quo}$  in *quo-d* (which), etc., origl. *ka*, cf. Gk.  $\pi\omicron$ , earlier  $\kappa\omicron$ ; *-que* (and), Sk. *-ka*, origl. *ka*, cf. Gk.  $\tau\epsilon$ ; *quatuor* (four) for *\*quatuores*, origl. *katvāras*, cf. Gk.  $\tau\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$ ; st. *cord-* in *cor* (heart) for *\*cord*, gen. *cord-is*, origl. *hard*, cf. Gk.  $\kappa\rho\alpha\delta\text{-}\acute{\iota}\alpha$ ;  $\sqrt{qui}$  in *qui-s*, *qui-d* (what), origl. *ki*, cf. Gk.  $\tau\acute{\iota}\text{-}\varsigma$ ,  $\tau\acute{\iota}$ ;  $\sqrt{qui}$  in *qui-es* (rest), origl. *ki*, cf. Gk.  $\kappa\iota$  in  $\kappa\epsilon\acute{\iota}\text{-}\tau\alpha\iota$ ;  $\sqrt{clu}$  in *clu-o* (hear),

*in-clu-tus* (famed), origl. *kru*, cf. Gk. κλυ; √*scid* in *scindo* (split), § 71. origl. *skid*, cf. Gk. σχιδ; *canis* (hound) for \**evan-is*, origl. *kvan-s*, cf. Gk. κύων, κυν-ός; √*dic* in *deic-o*, *dic-o* (say), -*dic-us* (saying), origl. *dik*, cf. Gk. δικ in δεικ-νυμι; *decem* (ten), origl. *dakan*, cf. Gk. δέκα; √*luc* in *lūc-eo* (shine), *louc-em*, *lūc-em* (n. lux, light), origl. *ruk*, cf. Gk. λυκ; √*loc* in *loc-utus*, *loqu-i* (speak), origl. *rah*, cf. Gk. λακ; √*uoc* for \**uec* in *uōc-em* (n. uox, voice), *uoc-are* (call), origl. *vak*, cf. Gk. Φεπ; suff. -*co*, fem. -*ca*, origl. -*ka*, fem. -*kā*, e.g. *ciui-cu-s*, *uni-cu-s*, cf. Gk. -*κο-s*, etc.

In Lat. as in Gk. (cf. § 62) *k* is sometimes softened into *g*, e.g. *ui-gin-ti*, *tri-gin-ta*, bes. *ui-cen-sumus*, *tri-cen-sumus* (*uigesi-mus*, *trigesimus*, cf. εἰ-κο-σι, τριά-κον-τα), -*gin-*, -*cen-*, is here a relic of (*de*)*cem*, f.f. *dakan*; *neg-otium*=\**nec-otium*; *gubernator* bes. κυβερνήτης, etc.

*Note 1.*—This is prob. the case also in *glōria* (glory) for \**clōria*, \**clōsia*, a further fm. of st. \**clōs-* for \**clouos-*, \**cleuos*=Gk. κλεΦες-, Sk. *grāvas-* (glory), Slav. *sloves-* (n. acc. *slovo*, word), root origly. *kru* (hear), as Sk. *gravas-ya-* (famous), *cravas-yā* (famousness, Kuhn, Zeitschr. iii. 398), yet the *ō* is strange, for we should have expected *ū*, cf. *in-iūria*=\**ious-ia*, fr. *ious*, *iūs*, a further fm. fr. \**ious*, \**ieuos*.

*Note 2.*—The pronunciation of *c* bef. *i* became, as in other langg., that of palat. *k* (perh. like Germ. *k* in *kind*): the preference for *c* before *i*, where another vowel follows, was the stronger, because in these cases *i* was nearly the same as *y*, so that the combinations *cio*, *ciu*, etc., were not only sounded like *kio*, *kīu*, but tolerably early (precisely as in other langg. also) were pronounced *tyo*, *tyu* (Ital. *ciò*, *ciu*), whence arose the common fluctuation in writing about the end of the second or the beginning of the third century A.D. (Corss. Krit. Nachtr. p. 48). The change of *i*, *y*, after *t*, into *s*, *ś* (*tyo*=*tśo*), does not occur till the Romance period.

*Note 3.*—In the pronoml. stems, *hi-*, *ho-* (*hi-ne*, *ho-ne*), notwithstanding the regularly corresponding Sk. \**ghi-*, *gha-* (in *hi*, then, *ha*, *gha*, important particles), ought not prob. to be separated from Goth. *hi-*, *hva-*, Slav. *st-*, *kū-*, Lith. *szi-*, *ka-*, i.e. origl. *ki-*, *ka-*, on account of the perfect similarity of their functions; further, in √*hab* in *hab-eo*, *hab-ēs*=Goth. *hab-a*, *hab-aīs* (I have, thou hast), cf. Osk. *hip-ust* (habuerit), *haf-iest* (habebit),

§ 71. whose initial conson. is, as in Goth., *k* (Goth.  $\sqrt{hab}$  also corresponds to Lat.  $\sqrt{cap}$  in *cap-io*); Lat. *h* seems to be origl. *k*, a permutation which is found sporadically in Sk. *hrd-*, *hrd-aya-* (heart)=origl. *kard-* (cf. Lat. *cord-*, Gk. *καρδ-ία*, Goth. *hairt-ō*) [the antiquity of this *h* in Aryan is shown by Zend *zaredhaem* =Sk. *hṛdayam*]. With Bopp, therefore, I now hold the Lat. pron. stems *hi-*, *ho-*, to be parallel-fms. to origl. *ki-*, *ka-*, regularly represented in Lat. by *qui-*, *ci-*, *quo-*, *cu-* (*qui-s*, *ci-tra*, *quo-d*, *cu-ius*, used as interrog. and relat.), and so, too,  $\sqrt{hab}$  in *hab-ēre*, as a parallel-fm. to *cap* in *cap-ere*, for Goth. *b* can be=origl. *p*, and *b* may possibly arise in Lat. through softening from *p* (*bibo*, drink,=origl. *papāmi*). The correspondence of Lat. *h* to Goth. *k* remains none the less remarkable, but esp. the conformity of the two langg. as regards *habēre*, whose perfect identity, nevertheless, no one denies. But we must not suppose words were borrowed in either case. Other views are found in Corss. Krit. Nachtr., p. 89 sqq.; Comp., 1st ed., p. 715.

Note 4.—Accordingly *p* is not in Lat.=origl. *k* (but cf. Osk. and Umbr.); words in which *p* seems=origl. *k* are therefore borrowed. Thus *Petronius*, *Epona*, are Keltic, cf. Lat. *quatuor*, *equos*; *popina* is Osk., cf. Lat. *coquina*, *coquere*; *palumbes*, bes. Lat. *columba*, must prob. be derived fr. Osk., and *limpidus*, too, bes. *liquidus*, must be a dialectic, and not originally a Roman by-form, in which case both words, as is often maintained, were identical; if *lupus* is really=Gk. *λύκος*, it must therefore also be attributed to Osk., Sab., or Umb., but beyond doubt it belongs to Zend; *u-rup-i-s*, *raop-i-s* (name of wild beasts of the breed of dogs),  $\sqrt{rup}$ , *lup* (rend, cf. Spiegel, Zeitschr. xiii. 366); *sap-io* (taste of), *sap-iens* (wise), does not belong to *sucus*, Gk. *σπός* (*sap*), but to O.H.G.  $\sqrt{sab}$  (understand, pf. *int-suab*; Mid. H. G. pres. *ent-sebe*, pf. *ent-suop*), Gk. *σοφ-ός* (wise), *σαφ-ής* (intelligible, clear), with unorigl. *asp.* (v. supr. § 62, 3, n. 2); *saep-io* (hedge in), *prae-saep-e* (crib, stall), does not agree with Gk. *σηκό-ς* even in root-vowel (Lat. *ae*=*ai*, Gk. *η*=*ā*); *trepit* (vertit; Paul. Ep., 367; Curt. Gr. Et.<sup>2</sup> 411) seems to be borrowed from Gk. *τρέπει*.

2. Origl. *t*=Lat. *t*; e.g. in *tu* (thou), origl. *tu*, cf. Gk. *τύ, σύ*;  $\sqrt{to}$  in *is-tu-d* (dem.), origl. *ta*, *ta-t*, cf. Gk. *τό*;  $\sqrt{ten}$  in *ten-tus* (held, stretched), *ten-or* (holding, length), *ten-eo* (hold), *ten-do* (stretch), origl. *tan*, cf. Gk. *τα, τευ*; st. *tri-* (three) in *trēs*, *trīs*, *treis*, origl. *tri-*, cf. Gk. *τρι-* in *τρεῖς*;  $\sqrt{sta}$  (stand) in *sta-tus*,

*sta-re*, origl. *sta*, Gk. *στα*;  $\sqrt{teg}$  (cover), origl. *stag*, Gk. *στεγ*; § 71.  $\sqrt{pet}$  in *pet-o* (make for), *im-pet-us* (onset), *penna* fr. *pes-na*, \**pet-na*, origl. *pat* (fly, fall), cf. Gk. *πετ*;  $\sqrt{uert}$  in *uert-ere* (turn), origl. *vart*; suff. *-to*, fem. *-ta*=*-tā*, cf. Gk. *-τό-*, *-τη*, e.g. in *da-tu-s*, origl. *da-ta-s*, Gk. *δο-τός*; *-t*, 3 p. sing., *-nt*, 3 pl. vb., origl. *-ti*, *-nti*, cf. Gk. *-τι*, *-ντι*, e.g. *fer-t*, *fero-nt(i)*, Sk. and origl. *bhāra-ti*, *bhāra-nti*, Gk. *φέρε-(τ)ι*, *φέρο-ντι*, etc.

Note 1.—On final *t*, cf. § 79: for Lat. *dr*=Gk. *θρ*, origl. *tr*, § 77, 1, c.

Note 2.—The change fr. *ti* bef. vowels to *ts* (*z*) occurs first in Romance langg.

3. Origl. *p*=Lat. *p*, e.g.  $\sqrt{po}$  in *po-tus* (drink), origl. *pa*, cf. Gk. *πο* in *πόσις*; in *bi-bo* (drink), f.f. *pa-pāmi*, *p* has been softened into *b*, a change occurring also in other isolated cases (cf. Corss. Krit. Nachtr. p. 176 sqq.); \**po-ti-s* in *impos*, *compos*, *im-po-tem*, *com-po-tem* (unable, able), *po-t-est* (he can), *-po-te*, *-pte* (a noticeable affixed particle, e.g. *ut-pote*, *suo-pte*), Sk. and origl. *pā-ti-s* (lord), Gk. *πόσις*, origl.  $\sqrt{pa}$  (protect); *pa-ter* (father), origl. *pa-tar-s*, cf. Gk. *πατήρ*, same root;  $\sqrt{ple}$  in *plē-nus* (full), origl. *par*, *pra*, cf. Gk. *πλε*; *ped-is* (gen.; n. *pes*, foot), Sk. and origl. *pad-ās*, cf. Gk. *ποδός*;  $\sqrt{spec}$  in *spec-io*, *spic-io* (see), *spec-ies* (appearance), Sk. *paç* for \**spaç*, O.H.G. *spah* (in *spēh-ōn*, espy, *spāh-i*, shrewd), origl. *spak*;  $\sqrt{tep}$  in *tep-eo* (am warm), *tep-or* (warmth), Sk. and origl. *tap*;  $\sqrt{sop}$  in *sop-ire* (make sleepy), *som-nus* (sleep) for \**sop-nus*, Sk. and origl. *svap*, cf. Gk. *ὑπ-*, etc.

Note.— $\sqrt{flu}$ , *flug* (*fluc-tus*), a later and further fmn. fr. *flu*, in \**flou-o*, *flu-o* (flow), does not belong to *πλυ*, Sk. *plu*, Slav. *plu*, etc., for Lat. *f* is not=origl. *p*: this root is represented by Lat. *plu* (*plu-it*, i.e. \**plou-it*, it rains); perh. Lat. *flu* is to be placed beside Gk. *φλύω* (swell, overflow), *οἰνό-φλυξ*, *-φλυγος*; so Curt. Gr. Et.<sup>2</sup> 271; we can scarcely take *flu* for \**sflu*, and this for \**sflu* fr. \**stru* for *sru* (flow), with Ad. Kuhn (Zeitschr. xiv. 223); in the latter case Lat. *fluo*, i.e. \**flouo*, stands equal to Sk. *srāvāmi*, Gk. *ρέω*; *flu-men* for \**sθroumen*, \**sθreumen*, essentially =*ρέυμα* for \**σρευμα*, O.H.G. *strou-m*, Pol. *strumień* (running stream).

## § 72. Momentary sonant unasp. consonants.

1. Origl. *g*=Lat. *g*, *gv* (*gu*), *v*.

Lat. *g*=origl. *g*, e.g.  $\sqrt{g}$ en in *gi-g(e)n-o* (beget), *gen-us* (race), *gna* in *gnā-tus* (one born, son), origl. *gan*, cf. Gk. γεν;  $\sqrt{g}$ no in *gnō-sco* (learn), *gnō-tus* (known), origl. *gna*, transposed fr. *gan*, cf. Gk. γνο in γι-γνώ-σκω; *genu* (knee), cf. Gk. γόνυ, Sk. ḡānu, Goth. kniu;  $\sqrt{ag}$  in *ago* (drive), origl. *ag*, pres. *ag-āmi*, Gk. ἀγ in ἀγ-ω;  $\sqrt{iug}$  in *iugum* (yoke), *iung-o* (join), Sk. yug, *yug*, origl. *yug*, cf. Gk. ζυγ, etc.

Lat. *gv* (*gu*)=origl. *g*. As origl. *k* developed into *qu* (*kv*), so also *g* (=origl. *g* and *gh*, cf. § 73, 1) into *gv*: this *gv* is, however, retained only after *n*; it also occurs after *r*, bes. *g*, in *urgeo* bes. *urgeo* (urge),  $\sqrt{urg}$ , origl. *varg*, cf. Sk. varḡ (shut out), Lith. vèr̃s-ti (urge). Between vowels this *g* has become assimilated to the *v* (without lengthening of a previous short syll.), so that the *v* alone therefore remains. In this way it happens that Lat. *v* betw. vowels may be origl. *g* and *gh*, e.g.  $\sqrt{uig}$  for *\*guig*, cf. Germ. *quick* in *uixi* (pf.)=*\*uig-si*, *uic-tus* (diet)=*\*uig-tus*, but *uīu-os* (alive), *uīu-o* (live) for *\*uigu-os*, *\*uigu-o*. For further exx. of this interchange of sound *v*. sub 'gh' (v. Corss. Krit. Beitr., p. 68, on interchange of *g* and *gv* in Lat.).

Note 1.—*fluxi*, *fluc-tus*, *con-flūg-es* (confluence), bes. *fluo*, i.e. *\*flou-o* (flow), show indeed a further fm. of  $\sqrt{flu}$  to *flug*, as Gk. φλυ to φλυγ (§ 71, 3 n.); we see, however, no ground for the assumption that *fluo*, *\*flou-o*, together with *fluu-ius* (river), have passed through fms. *\*flogu-o*, *\*flugu-ium* (Corss. Ausspr. etc., i.<sup>1</sup> 44). In this case the root-fm. is preserved without *g*.

Note 2.—Cf. exx. cited under *gh*, § 73, 1, and sound-laws, § 77, 1. a.

Note 3.—In *bos*, *bouis* (ox)=Gk. βοῦς, βοFός=Sk. gāus (gen. gōs prob. represents origl. *gav-as*), cf. O.H.G. *chuō*, *b*=origl. *g*, a correspondence of conson. otherwise foreign to Lat.; accordingly the word is probably borrowed. G. Curt. Gr. Et.<sup>2</sup> nos. 639, 642, brings forward *super-bus*, *super-bia* (proud, pride), which he takes to stand for *\*super-bios*, as=Gk. υπέρ-βιος (overween-



ing), *-βla* (presumption), *-βios* however=Sk. *gi*, pres. *gáy-āmi* § 72. (triumph), f.f. *gi*; *bo-ere*, *bou-are* (cry, sound), *re-bo-are* (re-sound), with Gk. *βο-ή* (call, cry) fr. Sk. *√gu* (let sound), Old Bulg. *gov-orŭ* (noise); *super-bus* is, however, not precisely similar to *ὑπέρ-βιος*, a word compounded according to Gk. principles (for we should then be obliged to consider it borrowed), but rather a special Lat. fmn. like *acer-bus*, *mor-bus* (Corss. Krit. Beitr. 61), and *boare* with *βοή* need not by any means be referred to Sk. *gu*, O. Bulg. *gov-orŭ*. It seems to me to be a mere imitative sound.

Note 4.—*c* and *g* were not distinguished in earlier Lat. writing, but prob. in the spoken lang. only.

Note 5.—Bef. *n* we are now accustomed in pronunciation to change Lat. *g* to gutt. *ñ*, i.e. the *g* becomes assimild. to *n*, according to its scale, becoming nasal: instead of *mag-nus*, *dig-nus*, etc., we say *mañ-nus*, *diñ-nus*. This is the same interchange of sound which is seen quite early in the lang., e.g. in *Sam-nium* for *\*Sab-nium*, *som-nus* for *\*sop-nus*. Spellings such as *singnum* make it probable that even as early as the times of the later Cæsars, people had begun to pronounce *signum* as *siñnum*. Yet we cannot consider this pronounc. of *gn* as *ñn* to be ancient, because the Roman grammarians do not mention it. From this later pronunciation of *gn* we must distinguish the principle on which *gn* was treated in Romance langg., where it became a palatal *ñ*, e.g. Ital. *magno*, *degno* (pron. *maño*, *deño*), Fr. *magne*, *digne* (pr. *mañ*, *diñ*). Therefore the above-named pronunciation of Lat. *gn* cannot have arisen through Romance influence.

## 2. Origl. *d*=Lat. *d*, rarely *l*.

Lat. *d*=origl. *d*, e.g. *√da* in *dā-tus* (given), Sk. and origl. *√da*, cf. Gk. *δο*; *√dom* in *dom-are* (tame), Sk. and origl. *√dam*, cf. Gk. *δαμ-άω*; *dom-us* (house), Sk. and origl. *dam-as*, cf. Gk. *δόμ-ος*; *dent-em* (tooth, acc.), Sk. and origl. *dánt-am*, cf. Gk. *ὀ-δόντ-α*; *√uid* in *uid-ere* (see), Sk. and origl. *vid*, Gk. *ἴδ*; *√ed* in *ed-o* (eat), Sk. and origl. *ad*, cf. Gk. *ἐδ*; *√sed* in *sed-eo* (sit), Sk. and origl. *sad*, cf. Gk. *ἐδ*, etc.

Lat. *l*=origl. *d* in *initio*, and, more rarely, medially bef. vowels, e.g. *lacrima* (tear) fr. *dacrima* (Festus), cf. *δάκρυ*, Goth. *tagr*, O.H.G. *zahar*; *lëwir* (father-in-law), cf. *δᾱήρ*, st. *dāep*, for *\*dauēp*, *\*dauFep* (Ebel, Zeitschr. vii. 272), Sk. st. *dēvár*-, n. sing.

§ 72. *dēvā*, also *a*-st. *dēvarā-s*, O.H.G. *zēihhur*, Lith. *dēveri-s* (known to me through the Dictionary only), O. Bulg. *děveri*; *lingua* (tongue), earlier *dingua*, cf. Goth. *tuggō*, Germ. *tunge*; *ol-ere* (smell) bes. *od-or* (scent), cf. ὀδ-ωδ-α, ὀδ-μή, ὀσμή. Sometimes both the *d*- and *l*-forms remained extant; thus *im-pel-imentum* bes. *im-ped-imentum* (hindrance), fr. st. *ped-* (pes, foot); *de-lic-are* bes. *de-dic-are* (dedicate), *√dic* (*dīc-o*, δεικ-νυμι, etc.), etc.

3. Lat. *b* may be origl. *b̄* (v. § 46, 3), e.g. in *bal-are* (bleat), cf. Gk. βλη-χή (a bleating), βλη-χάομαι, Slav. *blě-jā*, O.H.G. *blā-zan* (bleat), an onomatopoëtic word; *brevīs* (short), corresponding to Gk. βραχύς, Slav. *brŭzŭ* (quick); *√lab* in *lāb-itur* (glides, sinks), *lap-sus*=\**lab-tus* (past part.), Sk. *√lab*, *lamb* in *lāmb-atē* (he sinks, falls).

§ 73. Momentary sonant aspirated consonants.

*Note 1.*—*f* may represent any of the aspp., and is placed mainly in *initio*; medially *b* occurs instead of *f*; yet *rāfu-s* (red), *scrofa* (sow), *Afer* (African), *siflus* and *sifilare* (Fr. *siffler*, Zeitschr. xvi. 382) bes. usual *sibilus* (whistling, piping), *sibilare* (to whistle, pipe), etc., with medial *f* betw. vowels, according to the principles of the other Italian langg., whose influence perh. made itself felt in these words (Corss. Krit. Nachtr. p. 194, sqq.). In *signi-fer*, *pesti-fer*, and the like, *f* evidently arises from the perceptible connexion with *ferre*, whilst in *ama-bam*, etc., fr. *√fu* (*fui*, etc.), origl. *bhu* was no longer felt.

*Note 2.*—*ch*, *th*, *ph*, are not Latin but Gk. sounds, which did not come into use till a comparatively late period, and are yet unknown in the earlier lang. Further details as regards the history of these ways of spelling belong to the special gr. of Lat.

1. Origl. *gh*=Lat. *g*, *gv* (*gu*), *v*, *h*, *f*.

Lat. *g*=origl. *gh*, e.g. *√ger*, *gra*, in *ger-men* (bud),=Lith. *zel-mŭ*, st. *zel-men-* (sprout), *grā-men* (grass), origly. a side-form of *ger-men*, cf. O.H.G. *gruo-ni* (green), *gra-s* (grass), Sk. *hār-it*, *har-ita-* (green), Zend *zairita-* (yellowish-green), Gk. *χλο-ή* (green, grass), O. Bulg. *zel-enŭ* (green), Lith. *žél-ti* (grow green,

wax), *zál-ias* (green), *zól-é* (grass, greens), origl.  $\sqrt{ghar}$ , *ghra* § 73. (be green, yellow, grow green); *grā-tu-s* (pleasant), cf. Osk. Umbr.  $\sqrt{her}$  (wish), *χάρ-ις* (grace), *χαίρω*, i.e. \**χαρ-γω* (rejoice), Sk. *har-yāmi* (love, desire), Germ.  $\sqrt{gar}$  (desire), e.g. in O.H.G. *gēr-ōn* (desire), origl.  $\sqrt{ghar}$ , *ghra*; *grando* (hail) bes. Sk. *hrād-unī*, Gk. *χάλαζα*, i.e. \**χαλαδ-γα*, \**χλαδ-γα* (v. § 29, 1), origl. root therefore *ghrad*; except before *r* and in *ger-men* Lat. *g=gh* is confined to the middle of words;  $\sqrt{ang}$  in *ang-o* (throttle, kill), *ang-ustus* (narrow), *ang-or* (pain), *ang-ina* (quinsy), origl.  $\sqrt{angh}$ , Gk. *ἀρχ ἀχ* in *ἀρχ-ω*, *ἄχ-νυμαι*, *ἄχ-os*, Sk. *ah*, *āh*, Goth. *agg*, origl. *agh*;  $\sqrt{lig}$  in *lig-urio*, *lī-n-g-o* (lick), origl. *righ*, Sk. *rih*, *lih*, Gk. *λιχ* in *λείχ-ω*, *λίχ-νος*, Goth. *lig*;  $\sqrt{mig}$  in *mi-n-g-o*, *mēio*, for \**migio*, origl. *migh*, Sk. *mih*, Gk. *μιχ* in *ὀ-μιχ-έω*, *ὀ-μίχ-λη*.

Lat. *gv* (*gu*), *v*=origl. *gh* (cf. § 72, 1, and § 77, 1, a), e.g. *angu-is* (snake), *angu-illa* (eel), cf. Gk. *ἔχ-ις* (viper), *ἔγγ-ελυς* (eel), Sk. *ah-is*, i.e. \**agh-is*, Lith. *ang-is* (snake), *ung-ur'ys* (eel), O.H.G. *unc* (snake); in *nix* (snow), i.e. \**nig-s* fr. \**snigh-s*, gen. *niu-is* for \**nigu-is*, \**snigh-as*, is found—as also we see fr. Lith.  $\sqrt{snig}$ , in *snig-ti* (to snow), *snėg-a-s* (snow), and Gk. *νίφ-α* (snow, acc.), *νίφ-ει* (it snows)—an origl.  $\sqrt{snigh}$  as a basis, which is clearly shown in Sk. *snih* (be moist); *breu-is* (short) for \**bregu-is*, Gk. *βραχύς*; *leu-is* (light) for \**leguis*, cf. *ἐ-λαχύς*, Sk. *laghū-s*. In *breuis* and *leuis* the correspondence of *v* to *gu* ought prob. to be explained as occurring through change of origl. *gh* to *gv*, but rather through the introduction of a secondary *i* into the previously existing stems *bregu-*, *legu-*, = *braghu-*, *raghu-*. Nevertheless even thus the origl. *gh* is involved in the *v*, because the *gh*, or rather its Lat. equivalent *g*, has become assimild. to the *v*.

*Note.*—Therefore *g* may represent both origl. *gh* and *g*; in such cases as *mag-nus* (great) bes. *μέγ-as*, *ego* (I) bes. *ἐγώ* (§ 64, 1), we must not permit ourselves to determine that Lat. *g* is = origl. *gh*, merely on account of Sk. *mah-ánt-*, *ahám*,

§ 73. since the corresponding Goth. fms. *mik-ils*, *ik*, show the unaspirated conson.

Lat. *h*=origl. *gh*, esp. in *initio*, very rarely in *medio*, e.g. *hiem-ps* (winter), cf. Gk. *χιών* (snow), *χείμα* (storm), *χειμών* (winter), Sk. *himá-s* (snow, cold), Slav. *zima* (winter, cold), Lith. *žemà* (winter); *homo* (man), earlier *hemo*, st. *homen-*, *hemen-*, cf. Goth. *guma* (man), st. *guman-*, Lith. *žmũ*, st. *žmen-* (mankind), which collectively point to a f.f. *ghaman-*; *holus*, *helus*, *heluola* (greens), *√ghar* (be green), cf. *χλο-ή*, Sk. *hár-ita* (v. sub *g=gh*); *haed-us* (he-goat, Cod. Medic. Vergili), cf. Goth. *gaits* (f. she-goat), O.H.G. *geiz*, the initial conson. of this word was therefore *gh*; *√veh*, pres. *ueh-o* (carry, draw), *√vagh*, pres. *vagh-āmi*, Sk. *vah*, pres. *váh-āmi*, Zend *vaz*, pres. *vaz-āmi*, Gk. *Feχ* in *Φόχ-ος* (waggon), Goth. *vag* in *(ga-)vig-a* (move), *vig-s* (way), Slav. *ves*, pres. *vez-g*, Lith. *vez*, pres. *vez-ù*.

The *h* easily comes to be entirely lost, e.g. in *anser* (goose) for \**hanser*, cf. Sk. *hāsá-s*, O.H.G. *gans*, st. *gansi-*, Slav. *gusi*, Lith. *žusi-s*; *olus* for earlier *holus* (v. supr.); *uia* (way) fr. \**ueh-ia*, \**ueia*, \**uīa*, *√ueh*, cf. the completely analogous Lith. *vėžė* (track), i.e. \**režya*, f.f. of Lith. and Lat. word, thus *vagh-yā*; *nēmo* (no man), fr. \**ne-hemo*, etc.

*Note.*—*h* is often found where it should not be, by false analogy, e.g. *humerus* for *umerus*, which is warranted by MSS., cf. Gk. *ὤμο-ς*, Sk. *āsa-s* and *āsa-m*, Goth. *amsa*, st. *amsan-*; in later times *h* was noticeably often placed bef. initial vowel: *h* must therefore have fallen out of use in many cases tolerably early.

Lat. *f*=origl. *gh*, e.g. *fel* (gall), st. *felli-*, clearly fr. \**felti-*, cf. Gk. *χολ-ή*, *χόλ-ος*, O.H.G. *galla*, Slav. *žlūčī*, *√ghar* (be green); *for-mu-s*, *for-midus* (hot), cf. Sk. *ghar-má-s* (heat), Scl. *grě-ti* (to warm), *gor-ěti* (burn), Germ. *warm* for \**gwarm* fr. \**gar-m*, all of which point to a *√ghar* (on Gk. *θερ-μός*, *θέρ-ομαι*, v. supr. § 64, 2. n.); *fra-gra-t* (*fragrare*, emit odour), provided it really comes from a redupln. of *√ghra*, cf. Sk. *gi-ghrā-ti*, *ghrā-ti* (stinks,

Benf. Or. u. Occ. iii. 69); *fu-tis* (tub), *fū-tilis* (unstable, cf. Curt. § 73. Gr. Et.<sup>2</sup> no. 203, p. 156), *√fu-d, fundo* (pour), cf. Gk. *√χρ* in *χέF-ω*, Teut. *gu-t*, in Goth. *giut-an* (pour).

Since *f* and *h* correspond to origl. *gh*, and *h* easily disappears altogether, we can explain such forms as *faedus*, *fēdus*, bes. *haedus*, *aedus*, *ēdus* (cf. *geiz*); *folus* bes. *holus* and *olus* (*√ghar*); *fostis* bes. *hostis* (foe; Goth. *gasts*, guest, points distinctly to the origl. initial *gh*; in both langg. the meaning has been developed in divergent lines, cf. Corss. Krit. Beitr. 217 sqq.); *fordeum* bes. *hordeum*, prob. for *\*horteum*, *\*horsteum*, cf. O.H.G. *gersta*, Gk. *κπιθή* for *\*χπιστη* (§ 68, 1, d; on this word cf. Corss. Krit. Nachtr., p. 104 sqq.); *festūca* (stalk, switch) bes. *hasta* (spear), cf. Goth. *gazds* (thorn), O.H.G. *gart* (thorn), *\*gartya* (*gardea*, *kertia*, *gerta*), initial origl. *gh* therefore; and the like. Cf. the change fr. *gh* to *f* in cases such as Engl. *enough* (pron. *inʔf*), A.S. *genōh* (genug); *laugh* (pr. *lāf*), A.S. *hleahhan*, Goth. *hlahyan* (laugh), etc.

Note 1.—No ex. of *b*=origl. *gh* seems to be found.

Note 2.—The origl. *√ghar* (be green) is found also in fms. *ger* (germen), *gra* (grāmen), *hel* (helus), *hol* (holus), *ol* (olus), *fol* (folus), and *fel* (fel). In the other langg. also the feeling of relationship of the different words which spring from this root has been lost.

## 2. Origl. *dh*=Lat. *d, f, b*.

Lat. *d*=origl. *dh*, e.g. *mediu-s* (middle-)=origl. and Sk. *mādhya-s*, Gk. *μέσσος*, i.e. *\*methyo-s*, Goth. *midji-s*; *aed-es* (house, origly. fire-place, cf. *aes-tus*, *aes-tas*, fr. *\*aed-tus*, *\*aed-tas*), *√idh*, origl. Gk. *αἶθ-ω*, Sk. *indh*, cf. O.H.G. *eit* (fire); *uidua* (widow), cf. Sk. *vidhavā*, Goth. *viduvō*.

Hence it arises that the origl. roots *dā, dha* (give, set), may become intermixed, e.g. *ab-do* (do away, hide), *con-do* (found), *crē-do* (believe), belong not to *da-re* (give), but to a root lost in its uncompounded fm., corresponding to Gk. *τι-θη-μι*, Sk. *dā-dhā-mi*, O.H.G. *tuo-m*, cf. Sk. *grad-dadh-āmi* (believe); of the coin-

§ 73. cidence of the origl. *da*, *dha* (as in Zend), we find proof in *uen-di-t* (sells) bes. *uenum dat* = Sk. and origl. *vasnam dadhāti*, *ἄνον τιθῆσι*, *dat* therefore stands here most likely as representative of *dha*, Gk. *θε*, not of *do*, Gk. *δο*; further, *do* which has become like a *sf*, e.g. in *albi-du-s*, *ari-du-s*, *sordi-du-s*, is prob. to be referred to this root, as the similar roots also in Lat. are elsewh. still practically used as suffixes (e.g. *laua-cru-m*, *ludi-cru-s*, *ala-cri-s*, *uolu-cri-s*, cf.  $\sqrt{\text{kar}}$  (make); *late-bra*, *fune-bri-s*, cf.  $\sqrt{\text{bhar}}$ , *ferre*, etc.). In uncompounded words  $\sqrt{\text{dha}}$  is in Lat. *fa*, *fe*; *v.* post.

*Note.*—*r* for *d* fr. *dh* is altogether sporadic, in *meri-dies* (mid-day) fr. *\*medi-dies* (*medius* = *mādhyas*, cf. *μεσ-ημερία*, Germ. *mit-tag*, Sk. *madhyāhna-s* fr. *madhya-*, *medius*, and *ahan-*, day); in the case of *ar* = *ad* (*ar-uorsus*, etc.), the comparison with words of the kindred langg. is not easy (cf. regular change of *d* to *r* in Umbrian).

Lat. *f* = origl. *dh*, e.g. *fūmus* (smoke), cf. Sk. *dhūmās*, Lith. *dūmai* (pl. n. sing. would be *dūma-s*), Slav. *dymū*, O.H.G. *toum*, Gk. *θύ-ος* (burnt sacrifice),  $\sqrt{\text{dhu}}$ ; *fores* (pl. door), *foris* (passage), *foras* (outwards), cf. Gk. *θύρα*, Goth. *daúr*, O.H.G. *tor*, *turi*, Scl. *dveri*, Lith. *durys*, Sk., however, *dvāra-m*, *dvār-*, Ved. *dur-* with *d*, not *dh*, to which the S.- and N.-European langg. point; *fer-us*, *fer-a*, *fer-ox* (wild), cf. Gk. *θήρ*, *θηρ-ιον*; *fir-mus* (fast), *frē-tus* (trusting to), *frē-num* (bridle), *for-ma* (shape), cf. Sk. *dhār-imān-* (id.),  $\sqrt{\text{dhar}}$  (hold); *fīo* = *\*feio* (become), f.f. *dhayāmi*,  $\sqrt{\text{dha}}$  (set, do), Gk. *θε*, Goth. *da*, from which also the secondary  $\sqrt{\text{fac}}$  is formed (*fac-io*, make), likewise *fū-ber* (wright), st. *fa-bro-*, cf. Sk. *dhā-tar-* (founder, ordainer; Kuhn, Zeitsch. xiv. 229 sqq.).

In *rūfus* (red) = Goth. *raud-s*, f.f. *rāudha-s*,  $\sqrt{\text{rudh}}$ , medial *f* stands also for origl. *dh*, whilst *rub-er* (red), *rub-igo* (rust), are regular, and show *b* for *f* (v. supr. n. 1), but collateral *raud-us* (clod), origl.  $\sqrt{\text{rudh}}$ , cf. Sk. *rudh-irā-m* (blood), Gk. *ἐ-ρυθ-ρός*, and hence we find this root in Lat. as *rud*, *ruf*, *rub* (for *rutilus*, v.

infr.). Cf. the *f*-like pronounc<sup>n</sup>. of *th* in Eng. and *θ* in mod. Gk; § 73. in Russian Gk. *θ*=*f* in pronunciation.

Lat. *b*=origl. *dh* in medio, e.g. *rub-er*, st. *rub-ro*=ἐ-ρὺθ-ρό-, Sk. *rudh-i-rá-*, origl. *rudh-ra-*, √*rub*, Sk. *rudh*, Goth. *rud*, O.H.G. *rut*, Scl. *rüd* (be red); *uber* (udder), i.e. \**ouber*, Gk. οὐθαρ, Sk. *údhar-*, *údhas-*, *údhan-*, M.H.G. *üter*, *iuter*, root-syll. origl. *audh*; *uber* (adj. rich), i.e. \**oiber*, cf. Sk. *édh-atē* (increases), √*idh* (Walt. Zeitschr. x. 77); *uerbum* (word)=Goth. *vaird*, H.G. *wort*, f.f. *vardha-m*, cf. Lith. *várda-s* (m. name); *barba* (beard), stands bes. Norse *bardhr*, H.G. *bart*, Lat. *b*=Germ. *t*, *d*, must be der. fr. origl. *dh*.

### 3. Origl. *bh*=Lat. *b*, *f*, *h*.

Lat. *b*=origl. *bh* in medio, e.g. *ambō* (both)=Gk. ἄμφω, cf. Sk. *ubhāú*, earlier *ubhā*, Goth. *bai*, nt. *ba* (with loss of init. sound), Scl. *oba*, f.f. of st.=*ambha-*; *lub-et* (pleases), Sk. √*lubh* (desire), Goth. *lub* (in *liub-s*, dear, -*lubō*, love, etc.); *nēbula* (mist), *nūbes* (cloud), Gk. νεφέλη, νέφος, Sk. *nābhas* (cloud, sky), O.H.G. *nēbal*, Scl. *nebo* (sky); -*bē* in *ti-bē*, *i-bī*, (*c*)*u-bi*, corres. to Sk. -*bhyam*, sf. dat. sg. (only preserved in certain cases, e.g. *tú-bhyam*, -*bhya*=Lat. *ti-bī*); -*bus*, sf. dat. abl. pl.=Sk. -*bhyas*, cf. Gk. -φιν, both alike containing particle *bhi*: √*fu* in verb. fms. composed by it begins with *b*, e.g. *ama-bam*, *ama-ō*, for \**ama-fam*, \**ama-fo* (v. post. "conjugation").

Lat. *f*=origl. *bh*, e.g. √*fu* in *fā-ri* (speak), *fā-tum* (utterance, fate), origl. *bha*, cf. Gk. *φα* in *φη-μή*, *φω-νή*, *φά-τις*, Sk. *bhā-ś* (speak); √*fer*, pres. *fer-o* (bear), cf. Gk. *φερ* in *φέρ-ω*, origl. and Sk. *bhar*, pres. *bhár-āmi*; √*fu* (be) in *fu-turus*, *fu-am*, Sk. and origl. *bhu*, Gk. *φν* in *φύ-ω*, *φν-τός*; √*fug* in *fug-io* (flee), *fug-a*, cf. Gk. *φνγ* in *φεύγ-ω*, *φνγ-ή*, Sk. *bhug*, Goth. *bug*, pres. *biuga*, origl. *bhug*; *frāter* (brother), origl. *bhrātar-s*, cf. Gk. *φράτωρ*, Sk. *bhrātā*, Goth. *brōthar*, etc.

Lat. *h* is very rarely=origl. *bh*; e.g. in *hor-da* bes. *for-da* (bearing), √*fer*, origl. *bhar*; in *mi-hi*, -*hi* stands for -*bi*, which we should have expected, as also in Sk. *má-hyam* for \**ma-bhyam*,

§ 73. cf. *ti-bi*, Sk. *tú-bhyam*; in both langg. the initial *m* seems to have had a dissimilating influence on the *bh*. We must not hence venture to assign a fm. *ma-hyam* to the origl. lang., for the origl. could only be sounded *ma-bhyam* (or *ma-bhiam*, *ma-bhiyam*, cf. § 3), a f.f. which diverged later into Sk. *má-hyam*, Lat. *mi-hei*; in dat. pl. of *a-st.*, in *-ās* fr. *-ois*, *-ais*, origl. *-a-bhyams*, *-ā-bhyams* (v. 'decl.'). origl. *bh* has entirely disappeared, perh. through intervening *h* (cf. *mihī*); so too prob. *ama-ui* for *\*ama-fui*, *√fu*, origl. *bhu* (be).

*Note.*—In some exx. a Lat. *tenuis* stands apparently for an asp.; these are *rutilus* (fiery red) bes. Sk. *√rudh*, Gk. *ῥυθ*; *pati* (suffer) bes. Gk. *παθεῖν*; *pūtēre* (stink) bes. Gk. *πύθ-εσθαι*; *putāre* (calculate) bes. Gk. *πυθέσθαι* (learn), otherwise distinct from it in use; *sapiens* (wise) bes. Gk. *σοφός*; *latēre* (escape notice) bes. Gk. *λαθεῖν*, Sk. *√rah* for origl. *radh*. Cf. L. Meyer, Gr. of Gk. and Lat. Langg., i. p. 51; G. Curt. Gr. Et.<sup>2</sup> p. 374, Kuhn's Zeitschr. ii. 355; Grassmann ap. Kuhn, id. xii. 86 sqq.; Corss. Krit. Beitr. p. 75 sqq., 79 sqq. Herein we concur in the conclusions of Curt. and Corss., which amount to this,—that in the above-named words also *t* and *p* are not=origl. *dh*, *bh*, Gk. *θ*, *φ*. *ru-tilus* (cf. *fu-tilis*, *mu-tilus*) seems to have sf. *-tilo*, and to stand peculiarly for *\*rud-tilus*, *\*rus-tilus* (v. post.), like early Lat. *ad-gre-tus*, *e-gre-tus*, for *\*gred-tus*, *\*gres-tus* (class. *gressus*, *√grad*, *gred*, in *grad-ior*, step), *pa-tior* however is a later fm. fr. *√pa*, which is otherwise formed in Gk. *πα-θ*, *πεν-θ* (*πένθος*, suffering, grief); to the origl. existence of the shorter root-fm. *pa*, *πα*, the fms. *πέν-ομαι* (am in want), *πον-έω* (suffer, labour), point; therefore *πε-ν*, *πο-ν*, give evidence to *πα*, just as *γε-ν*, *γο-ν* (beget), do to a real pre-existent *γα* (*n* is a common secondary root-termn.). The same explan. holds good in *puteo*, where *t* belongs to the origl. root as little as does *θ* in *πύ-θομαι*; the root is *pu*, which clearly occurs in Lat. *pūs*, gen. *pūris* (matter), i.e. *\*pou-os*, *\*pou-es-os*, f.f. *pav-as*, *pav-as-as*, cf. *πύ-ον* (id.), Sk. *pū-yatē* (becomes foul, stinks), *pū-ya-s* (matter), Lith. *pū-ti* (be-foul), O.H.G. *fū-l* (foul), f.f. *pau-ra-s*. *Pu-tare* fr. *putus* (pure), lit. = 'make clean, clear,' and has therefore nothing to do with Gk. *πυθέσθαι*, Sk. *√budh*, etc.; *σοφός* stands for *\*σοπος* with unorigl. aspn., cf. supr. § 62, 3, n. 2. Thus *latēre* alone remains unexplained bes. *λαθεῖν*, a solitary instance, for which we must not try to make good a consonantal change which is otherwise unknown.



CONSONANTAL PROLONGED-SOUNDS.

Spirants *y, s, v*.

§ 74.

1. Origl. *y*=Latin *j* (written *i*), *i*.

Lat. *j*=origl. *y*, initial and medial, yet not commonly between vowels, and almost only after long vowels, e.g. *cū-ius*, *plebē-ius*, or when a conson. has assimilated itself to the *y*, as in *āio*, *māior*, *mēio* (v. post.), e.g. *√iug*, Sk. *yug*, Gk. *ζυγ*, origl. *yug*, in *iu-n-go*, (join), *iug-um* (yoke)=origl. and Sk. *yug-ām*, Gk. *ζυγ-όν*, Goth. *yuk*, O.Bulg. *igo*=\**jūg-o*; pronl. *√ya* in *ia-m* (already), cf. Lith. *yaù*, Goth. *yu* (already); *ius* (broth), cf. Sk. *yūśa-s*, *yūśa-m* ('pease-soup,' 'the water in which pulse of various kinds has been boiled;' Wilson), Scl. *iucha*; *iuuenis* (young man), cf. Sk. *yúvan-*, Góth. *yuggs*, Scl. *yunü*, Lith. *yaúnas* (young); *āio* (say) for \**ag-io*, pres. fmn. in sf. origl. *ya*, *√ag*, origl. *√agh*, cf. *ad-äg-ium* (saying), Sk. *ah* (say); *māior* (greater) fr. \**mag-ior*, comp. sf. *-ior*, earlier *-ios*, Gk. *-iov*, Sk. *-yās*, *-iyās*, origl. *-yans*; *mēio*=\**migio*, i.e. \**migh-yāmi*, pres. fmn. in origl. *ya*, etc.

Lat. *i*=origl. *y* after consonn., e.g. *med-ius*=origl. and Sk. *mādhyas*, cf. *μέσος*=\**meθ-yos*; *patr-iu-s* (father-), origl. *patar-ya-s*, cf. *πάτερ-ιο-s*, Sk. *pitr-ya-s*, st. origl. *patar-*, sf. *ya*; *siem*, *siet* (1, 3, sg. opt. pres.), origl. *as-yā-m*, *as-yā-t*, cf. *ἐῖν*, *εἶν*, fr. \**ἐσ-υν-μ*, \**ἐσ-υν-τ*, Sk. *syā-m*, *syā-t*, opt. pres. *√as* (be); *capio* for \**cap-yō*, i.e. \**kap-yā-mi*, pres. in origl. *ya*, etc.

Not uncommonly *y* disappears entirely, thus regularly betw. vowels, as, e.g. *moneo* (remind, warn), f.f. *mānayāmi*, causative from *√men* (*men-tem*, *me-min-i*), origl. *man* (think); *sēdo* (seat, set), fr. \**sēdao*, \**sēdayo*, Sk. and origl. *sādāyāmi*, caus. from *√sed* (*sedere*), origl. *sad*; further before *i* and *e* which stands for *i* (§ 35, § 38), e.g. *capis*, *capit*, for \**capyis*, \**capyit*, i.e. *kap-ya-si*, *kap-ya-ti*, bes. *capio*, i.e. *kap-yā-mi*; *obex* (obstacle, hindrance), gen. *obicis*, for \**obyex*=\**ob-yic-s*, *ob-yic-is*, *√iac* (cf. *iāc-io*, *ob-iic-io*, *ob-ic-io*); yet elsewh.

§ 74. after consonn. also, e.g. *minor*, *minus* (less), for \**min-ior*, \**min-ius*, origl. sf. -*yans*, compar.-fmn. ; *ero*, *eris*, *erit*, fr. \**eso*, \**esis*, \**esit*, for \**esyō*, \**esyis*, \**esyit*, f.f. *as-yā-mi*, *as-ya-si*, *as-ya-ti*, pres.-fmn. through *ya* of √*as*, which expresses fut. meaning, cf. Sk. *s-yā-mi*, *s-yā-si*, *s-yā-ti*, Gk. ἔσομαι for \*ἔσ-γo-μαι ; -*bus* sf. of dat. and abl. pl. origl. -*bhyams*, Sk. -*bhyas*, etc.

2. Origl. *s*=Lat. *s*, *r*.

Lat. *s*=origl. *s*. Initially, generally also finally, medially betw. mute consonn. ; betw. vowels *s* passes over into *r* almost always in the class. lang. Before sonant consonn. *s* partly falls out (becomes assimld.), partly likewise becomes *r* (v. 'sound-laws'), e.g. √*sed* (sed-ere), origl. and Sk. *sad*, Gk. ἔδ, Goth. *sat* (sit) ; *septem* (seven), Sk. and origl. *sāptan*, Gk. ἑπτά ; √*sta* (stand), e.g. in *sta-tus*, origl. *sta*, Gk. στα, Sk. *stha* ; √*ster* in *ster-no* (strew), Sk. and origl. *star*, Gk. στορ ; √*es* in *es-t*, origl. and Sk. *as*, Gk. ἐσ in ἐσ-τί ; √*us* (burn) in *ur-o*, *us-tus*, origl. *us*, Sk. *uš* ; -*s*, sf. of nom. sg., origl. and Sk. -*s*, Gk. -ς, Goth. Lith. -*s*, e.g. *equo-s*, origl. *akva-s*, Gk. ἕκπο-ς, Sk. *ācva-s* ; sf. -*os*, -*es*, e.g. *gen-os*, *gen-us* (race), gen. *gen-er-us*, *gen-er-is*, origl. *gan-as*, *gan-as-as*, cf. Gk. γέν-ος, \*γεν-εσ-ος=γένους, Sk. *gán-as*, *gán-as-as*, etc.

Lat. *r*=origl. *s* (cf. sound-laws, § 77, 1. f.).

3. Origl. *v*=Lat. *v* (in writing undistinguished fr. *u*), *u*.

Lat. *v*=origl. *v*, e.g. √*vid* in *uideo* (see), Sk. and origl. *viḍ*, Gk. *Fiḍ* ; √*vom* for \**rem* in *uom-o* (spue), Sk. and origl. *vam*, Gk. *Fem* ; √*roc* for \**rec* in *uoc-are* (cry), *uōc-em* (acc. voice), origl. *vak*, Sk. *vaḥ*, Gk. *Fem* ; √*veh* in *ueh-o* (carry), origl. *vagh*, Sk. *vaḥ*, Gk. *Fex*, Goth. *vag* ; √*vol* in *uol-t* (he wills), Sk. and origl. *var* (uelle) ; *oui-s* (sheep), origl. *avi-s*, Lith. *avì-s*, Sk. *āvi-s*, Gk. ὄvis ; *nouo-s* (new), orig. and Sk. *nāva-s*, Gk. *véFo-s*, etc.

*Note*.—Though *quis*, *quod*, *anguis*, *suaris* are the usual ways of writing those words, yet here, too, *u*=*v* (thus *qvís*, *qvod*, *angvis*, *srauis*), because this *u* is not metrically=vowel.

Lat. *u*=origl. *v* after mom. consonn. and *n*, e.g. *quatuor* (four), § 74. Sk. *katvāras*, Gk. *τέτταρες*=\*τετ*Fapēs*, Goth. *fidvōr*, origl. *katvāras*; this *u*=*v* seems secondarily to have the force of a conson., whence e.g. the lengthening by position of the short *a*, expressed in the spelling *quattuor*; esp. often *u*=origl. *v* in the origl. st.-fmative sf. *-va*=Lat. *-uo*, *-vo*, later *uu*, *vu*, which in Lat. were sounded *-uo* (later *-uu*), fem. *-ua*, after most consonn., except *r*, *l*, *q*, e.g. *al-ūo-s* ('the nourishing—'), √*al* (*al-o*, nourish); *ar-ūo-m* ('the ploughed—'), √*ar* (plough); *eq-ūo-s* (horse), origl. *ak-va-s*, Sk. *āk-va-s* ('the running—'), origl. √*ak* (run), etc.; but *uac-uo-s* (empty), √*uac*; *noc-uo-s* (hurtful), *re-lic-uo-s* (left over) bes. *re-liq-vo-s*, √*noc*, *lic* (altogether usage often wavers betw. *v* and *u*, as *aquāe*, *acuam*, bes. *aqua*; *tenvia*, *genva*, bes. *tenuia*, *genua*, etc.); *con-tig-uo-s* (contiguous), √*tag* (*tango*); *de-cid-uo-s* (falling off), √*cad* (*cad-o*); *in-gen-uo-s* (inborn, free), √*gen* (*gi-gn-o*, *gen-us*); *sūd-or* (sweat), *sūd-are* (sweat), prob. for \**suid-or*, \**suid-are* (as e.g. gen. *senatus* for *senatuis*), and this for \**svid-or*, \**svid-are*, √*svid*, cf. ἰδῖω for \*σ*Fid-ω*, Sk. *svid-yāmi*, O.H.G. *swizzan*, *sweiȝ*, *swiȝ*, earlier *svit*, origl. *svid* (sweat), etc.

*Note*.—*suōs* (his) is not=*sua-s*, but was sounded *soros* in the earlier lang.; accordingly we have also *tuūs*=*toros*; in Lat. and in Gk. there is here a step-fmn. of *u* to *eu*, *ou* (έός, τέός=\**seu-os*, \**teu-os*), whilst the other langg. show *v*.

Not unfreq. *v* disappears entirely, thus e.g. *se*, *si-bi* (himself), etc., for \**sve*, \**svi-bi*, fr. st. origl. *sua*; *te* (thee), *ti-bi* (to thee), for \**tve*, \**tvi-bi*, cf. Sk. *tva-m* (n. sg.); for origl. initial *sua*-, so occurs regularly (v. supr. § 33); *canis* (hound) for \**cvan-is*, cf. κύων, Sk. st. *ḡvan*, f.f. *kran*-; *suadeo* (recommend) for \**suadveo*, fr. *suavis* (sweet)=\**suadv-i-s*, cf. G. ἡδύς, Sk. *svādú-s*; *deus* (god)=\**dēus*, \**dēvo-s*, \**dēivo-s*, \**dīvo-s*, f.f. *daiva-s*, cf. Sk. *dēvā-s*, Lith. *dēva-s*. The later lang. permits frequent loss of *v* from betw. vowels, e.g. *suus*, *suum*, for earlier (inserr.) *souos*, *souom* (\**suvus*, \**suvum*); *fluunt*, earlier (inserr.) *flouont*; *fui*=\**fui*, and so, too, in other like cases; *boum* for *bouum*; *prudens* fr. *providens*;

§ 74. *nōlo*=\**neuolo*; *amarunt*=*amauerunt*, etc. Yet *nouos*, *ouis*, etc., with *v* preserved, are the only fms. found.

*Note.*—On the alleged change of *v* to *b* in Lat. v. Corss. Krit. Beitr., 157 sqq. Only in *ferbui*, pf. fr. pres. *ferueo* (boil), *v* after *r* and bef. *u* has become *b*; *bubile* bes. *bouile* (ox-stall) seems caused by the analogy of *bu-bulus* (ox-); *opilio*, *upilio* (shepherd), stand for \**oui-pilio*, cf. *Pal-es*, αῖ-πολ-ος, βού-πολ-ος (Corss. ib. 152; Krit. Nachtr., p. 180 sqq.).

# § 75. Nasals.

1. Origl. *n*=Lat. *n*. As in other Indo-Eur. langg., so also in Lat., origl. *n* bef. gutt. consonn. becomes gutt., bef. labb. it becomes lab., i.e. *m*, (*n*=gutt. *n*, § 4). Exx.: *ne* (negation), in *ne-c*, *ne-fas*, etc., Sk. and origl. *na*; *in-*, Umbr. *an-*, Gk. ἀν-, Sk. and origl. *an-* (neg. in composn.); √*nec* in *nec-are* (kill), *noc-ēre* (l. n. Sk. *vek*, Sk. *naç*, origl. *nak*; st. *noc-ti* (night) in *noc-te-m*, origl. *nak-ti-*, cf. Lith. *nak-ti-s*, Gk. st. *νυκτ-*, Sk. *nākta-m* (adv. by night); *nāuis* (ship), Sk. and origl. *nāus*, Gk. *ναῦς*; √*gen* in *gen-us* (race), *gi-g(e)n-o* (beget), Gk. *γεν*, Sk. *ḡan*, origl. *gan*; *n* is common in suff., e.g. origl. *-na* in *plē-nu-s* (full), f.f. *prā-na-s*, origl. *par-na-s*, √*par* (fill), *na* fms. the perf. part. pass., but has also various other functions, e.g. *som-nu-s* (sleep) for \**sop-nu-s*, origl. and Sk. *svāp-na-s*, Gk. *ὑπ-vo-ς*; sf. *-man*, e.g. in \**gnō-men*, *nō-men* (name), Sk. *nā-man-*, origl. *gnā-man-*; *-nti*, *-nt*, fm. 3 pl. vb., e.g. \**fero-nti*, *feru-nt*,=φέρο-ντι, Sk. and origl. *bhāra-nti*, etc.

Exx. of change of *n* to *n̄*, *m*, are found in pres. fmn., e.g. *iū-n-go* (join), √*iug*, *ru-m-po* (break), Sk. *lu-m-pāmi*, √*rup*, Sk. *lup*, which in f.f. were prob. *yug-nāmi*, *rup-nāmi*; only later did the nasal pass into the root, whereby arose *yūṅgāmi*, *rum-pāmi*, i.e. *iungo*, *rumpo*.

*Note.*—On *gn* v. supr. § 72, 1, n. 5.

2. Origl. *m*=Lat. *m*, e.g. √*men* in *me-min-i* (remember), *men-tem*, *mens* (mind), *moneo* (warn), Gk. *μεν*, origl. and Sk. *man* (think); *mā-ter* (mother), μή-τηρ, Sk. *mā-tā*, origl. *mā-tar-s*;

√*mor* in *mor-i* (die), *mor-tuos* (dead), Sk. and origl. *mar*; √*uom* § 75. for \**uem* in *uom-o* (spue) (§ 33), Gk. *Feμ*, Sk. and origl. *ram*, etc. In sff. also *m* often occurs, e.g. sf. *-men*, origl. *man*, as in \**gnō-men*, *nō-men*, Sk. *nā-man-*, origl. *gnā-man*; origl. sf. *-ma*, an intensitive, most often forming superl., esp. in combination with sf. *-ta*, as *ta-ma*, Lat. e.g. in *pri-mu-s*, *optu-mu-s*; *-m* 1 pers. sg., *-mus* 1 pl., e.g. (*e*)*s-u-m* fr. \**es-mi*, Gk. *εἰ-μί* fr. same f.f., Sk. and origl. *ás-mi*; *feri-mus*, Gk. *φέρο-μεν*, Dôr. *φέρο-μες*, Sk. and origl. *bhārā-masi*; *-m* of acc. sing., e.g. *equo-m*, Sk. *ágru-m*, cf. Gk. *ἔππο-ν*, with *ν* for *μ*, acc. to Gk. sound-laws of termn., origl. *akva-m*, etc.

*Note.*—In *tene-brae* (darkness), prob. for \**tenes-brae*, \**temes-brae*, √*tam* in Sk. *tām-as* (darkness), O.H.G. *dēm-ar* (dawn), etc., *n* has arisen by dissimiln. fr. *m*, to avoid the labialism \**teniebrae*: in *nōnus* (ninth) for \**nōmus*, \**nouimus*, cf. *nouem* (nine), *septimus* bes. *septem*, *decimus* bes. *decem*, *primus*, etc., the init. *n* has had an assimilating influence; *gener* (son-in-law) does not stand for \**gemer* on acct. of γαμβρός (on which cf. § 66, 1, n. 1), because \**gemer* would have stood its ground like *nōmer* (ploughshare), also Sk. *ḡā-mātar-* (son-in-law) proves nothing, because it is a compd. of *ḡā* (come after) from √*ga*, origl. *ga* (gi-gn-ere), and *mā-tar-* (bearing, bringing forth); *gen-er*, st. *gen-ero* for *gen-ro-*, is derived rather fr. √*gen* (beget), sf. *ra*, in this case with auxil. vowel *i*, pronounced *e* bef. *r* (§ 38).

*r-* and *l-*sounds.

§ 76.

Origl. *r*=Lat. *r*, *l*.

Lat. *r*=origl. *r*, e.g. *rex* (king), i.e. \**rēg-s*, origl. *rāg-s*, cf. Sk. st. *rāj-* (id.); √*rub* in *rub-er* (red), *rub-ru-m*, cf. *ἐ-ρυθ-ρός*, *ἐ-ρυθ-ρό-ν*, Sk. *rudh-i-rā-m*, origl. *rudh-ra-s*, *rudh-ra-m*; √*rup* in *ru-m-p-o* (break), *rup-tu-s*, cf. Sk. *lup* (rumpere) in *lu-m-p-āmi*, *lup-tā-s*, Lith. *lup* in *lūp-ti* (flay); √*or* in *or-ior* (rise), *or-tus*, cf. *ὄρ-υμι*, Sk. and origl. *ar*; √*ar* in *ar-o* (plough), cf. *ἀρ-ώω*, ScL. *or-ya*, *ar-atrum* (plough), cf. *ἀρ-οτρον*, O. Bulg. *or-alo* for \**or-adlo*; √*fer*, 1 sg. pres. *fer-o* (bear), Gk. *φέρ*, 1 sg. pres. *φέρ-ω*, Sk. and origl. *bhar*, 1 sg. pres. *bhār-āmi*; *frā-ter* (brother), *φρά-τωρ*, Sk. *bhrātā*, origl. *bhrā-tar-s*, etc. *r* is frequent in

§ 76. stem-formative particles, thus in sff. *ro*, *ru*, origl. *ra* (*rub-ru-m*, origl. *rudh-ra-m*); *tōr*, origl. *tār* (*da-tōr*, origl. *da-tar-s*, n. sg.); *tro*, *tru*, origl. *tra*; in word-formative particles, i.e. in case- and person-termns., it does not occur.

Lat. *l*=origl. *r* (cf. 'sound-laws,' upon Lat. interchange of *l* with *r* for purposes of dissimiln.), e.g.  $\sqrt{\text{loc}}$  (speak) in *loqu-or*, *loc-utus*, Gk.  $\lambda\alpha\kappa$ , Scl. *rek* (*rek-q*, loquor), origl. *rak*;  $\sqrt{\text{luc}}$  in *luc-erna* (lamp), *lūc-em* (acc. light), Gk.  $\lambda\upsilon\kappa$ , Sk. *ruk*, Goth. *luh*, origl. *ruk*;  $\sqrt{\text{lic}}$  in *linguo* (leave), *re-lic-tus*, Gk.  $\lambda\iota\pi$  ( $\lambda\epsilon\iota\pi\omega$ ), Sk. *rik*, origl. *rik*;  $\sqrt{\text{lig}}$  in *lingo* (lick), Gk.  $\lambda\iota\chi$  ( $\lambda\epsilon\iota\chi\omega$ ), Sk. *lih*, origl. *righ*;  $\sqrt{\text{lub}}$  in *lub-et* (it pleases), Goth. *lub* (*liubs*, love), Sk. *lubh* (desire), origl. *rubh*; *lewis* (light) fr. *\*legu-is*, cf. Gk.  $\epsilon\text{-}\lambda\alpha\chi\upsilon\text{-s}$ , Sk. *laghū-s*, origl. *raghu-s*; *plē-nu-s* (full), f.f. *prā-na-s*, parall. fm. to *par-na-s*, Zend *perenō*, Sk. *pūrṇā-s*, i.e. origl. *par-na-s*, Goth. *fulls* for *\*ful-na-s*; *sollus* (whole, Fest.) for *\*soluo-s*, parall. fm. to *sal-uo-s* (whole), Gk.  $\sigma\lambda\phi\omicron\varsigma$ , Sk. and f.f. *sār-va-s*;  $\sqrt{\text{uol}}$ , *uel*, in *uol-t* (he wills), f.f. *var-ti*, *uel-le* (will), for *\*uel-se* (v. post), Sk. and origl. *var* (choose), etc. In st.-formative particles also *l* is common.

## § 77. SKETCH OF SOME SOUND-LAWS WHICH ARE IMPORTANT FOR COMPARATIVE GRAMMAR.

### MEDIAL.

1. Assimilation. We omit here the assimilns. which occur in prepositional compds.; they bear a subordinate meaning for Compar. Gr., and belong to the Special Gr. of Latin. Further, except that they are treated as well known, they are not at all, or only briefly, mentioned.

a. Complete assimiln. of foregoing to following consonn. This occurs after long vowels, after which doubled consonn. cannot easily be made audible, and can scarcely be distinguished from evanescence (ejection) of the former conson.; whilst after short vowels the doubling of the conson. is the distinctive mark of real assimiln. As, however, the evaporation of one conson. bef. another can hardly be conceived of as con-

ditioned in any other way than by assimiln. to the follg. cons., we § 77. likewise treat here of cases where consonn. are lost before consonn.

The doubling of consonn. was not characterized in writing before Ennius; in inserr. it does not appear in frequent use until after 640 A.V.C.

*Note.*—Upon the doubled tenuis in Lat. cf. C. Pauli, *Zeitschr.* xviii. 1 sqq., where many words of difficult etymol. are considered. Acc. to Pauli the doubling is not seldom unorigl., and arises 'through sharpened pronunciation.'

Exx. of complete assimiln. of foregoing to follg. consonn. after short vowels are found in *sum-mu-s* for \**sup-mu-s*, cf. *sup-er*, *sup-er-ior*, *sup-remus*; *flamma* fr. \**flag-ma*, cf. *flag-rare*; *serra* (saw), prob. fr. \**sec-ra*, cf. *sec-are* (cut); *sella* fr. \**sed-la*, cf. *sed-ere*; *lapil-lus* fr. \**lapid-lus*, cf. *lapid-em*; *puel-la* fr. \**puer-ia*, \**puer-u-la*, cf. *puer*; *asel-lus* fr. \**asin-lus*, \**asini-lus*, cf. *asini-s* (ass); *esse* fr. \**ed-se*, cf. *ed-o* (eat); *penna* fr. \**pes-na*, and this fr. \**pet-na*, √*pet*, origl. *pat* (fly), etc.

Complete assimiln. of foregoing to follg. consonn. after long vowels; the spelling does not show the doubling in these cases. The assimiln. (dropping out) of *d*, *t*, and often *n* before *s*, is well known; a foregoing short vowel therefore becomes long, wherein we believe we see an evidence that a doubling of the conson. was once really in existence, e.g. *suāsi* fr. \**suād-si*, pf. fr. *suād-eo*, etc.; *pēs*=\**pēd-s*, cf. *pēd-em*; *mīlēs*, *mīlēs* only later, fr. \**mīlēt-s*, cf. *milit-em*; *formōsus* fr. \**formonsus*, sf. origl. -*vans* fr. -*vant*, whose *v* disappeared; *equōs* fr. \**equon-s*, i.e. acc. sg. *equo-m*+pl.-sign *s*; *consul* bes. *cōsul*; *quotiens*=\**quotient-s* bes. *quoties*; *censor*, *censeo*, bes. rarer *cēsor*, *cēscō*, etc. Thus the lang. has sometimes decided early in favour of loss of *n*, whilst at others the *n* has stood exclusively for a longer time, and until a later period of written lang.

A follg. *j* assimilates itself not seldom to precedg. *g*; *j* is then written indivisibly, but the foregoing vowel, if short before, now becomes long (cf. § 39, 1), e.g. *mā-ior* fr. \**māg-yor*, cf. *mag-nus*, √*mag*, origl. *magh* (wax); *ā-io* fr. \**āg-yo*, cf. *ad-āa* ....

§ 77.  $\sqrt{ag}$ , Sk. *ah*, origl. *agh* (say); *mē-io* by dissimiln. (cf. § 38) fr. *\*mi-yo* for *\*mīg-yo*, cf. *mī-n-g-o*,  $\sqrt{mig}$ , Gk.  $\mu\chi$ , origl. *migh* (cf. § 74, 1). Bef. origl. sf. *-ya*, *g* remains, because here *y* changes into *i* (§ 74, 1), e.g. *ad-āg-iu-m*, *nau-frāg-iu-m*. Cf. the extensive loss of consonn. before *y* with compensatory lengthening in composition, e.g. *se(d)-iungo*, *pe(r)-iero*, *di(s)-iudico*, *tra(n)s-icio*, etc.

Loss of *g* bef. *v* without compensat. lengthening occurs, e.g. in *brēu-is* for *\*bregu-is*, cf.  $\beta\rho\alpha\chi\acute{\upsilon}-s$ ; *lēu-is* for *\*lēgu-is*, cf.  $\acute{\epsilon}-\lambda\alpha\chi\acute{\upsilon}-s$ ; *niu-is* for *\*nigu-is*, cf. *nix*=*\*nig-s*, *ningu-o*; accordingly the same process must be assumed in *uīuo* for *\*uīgu-o*, cf. *uixi*, i.e. *\*uig-si*,  $\sqrt{uig}$  (v. §§ 72, 1; 73, 1).

*d* disappears bef. *v* in *suāu-is* for *\*suād-uīs*, cf. Gk.  $\eta\delta\acute{\upsilon}-s$ , Sk. *svādú-s*.

Bef. nasals sometimes *g*, oftener *c*, disappears (*c* may also remain and become *g*, v. *c* in this section), more rarely without, more often with compensatory lengthening, *c* was evidently softened to *g* before it fell out (v. *c*), e.g. *stī-mulus* (goad), *stī-mulo* (I goad),  $\sqrt{stig}$ , raised a step to *stīg* (*in-stīg-o*, urge), nasalized in *in-stinc-tus* (urged)=*\*in-sling-i-us*, cf. Gk.  $\sigma\tau\acute{\iota}\chi\omega$  (prick)=*\*στρυγω*; *ex-ā-men* (swarm of bees, rank) for *\*ex-āg-men*,  $\sqrt{ag}$  in *a-gere* bes. *ag-men*, *teg-men*, *seg-mentum* (*g* is common bef. *n*, e.g. *lig-num*, *dig-nus*, *mag-nus*, etc.); *uā-nus* (empty) fr. *\*uāc-nus*, cf. *uāc-uos* (empty); *dē-ni* (ten apiece) fr. *\*dēc-ni*, cf. *dēc-em*; *pī-nus* fr. *pīc-nus*, cf. *pīx*, *pīc-is* (pitch); *pīnus*, on acct. of the vowel, cannot be akin to  $\pi\epsilon\acute{\upsilon}\kappa-\eta$ , Germ. *vieh-te*, which point to a  $\sqrt{puk}$ ; *nc* disappears thus in *quī-ni* (five apiece) for *\*quīnc-ni*, cf. *quinque* (five).

Before *m*, *c* disappears in *lū(c)-men* (light), where it is doubtful whether the vowel is simple or whether it is raised in the scale, whether fr. *\*lūc-men* or *\*louc-*, *\*lūc-men*; *cs*, i.e. *x*, disappeared bef. *m* in *sē-mestris* (six-monthly) for *\*sēc-mestris*, prob. also in *tē-mo* (pole) for *\*tex-mo*, cf. O.H.G. *dāhs-ila*, and Sk.  $\sqrt{takś}$  (compose, make).

Bef. *m*, *b* disappears, e.g. *glūma* (shell) for *\*glūb-ma*, cf. *glūb-ere* (pare); *grēmium* (lap) for *\*greb-mium*, cf. Sk. *gārbha-* (masc. id.), etc. (Corss. Krit. N. p. 236).



Bef. *l*, *x* has died out in *tē-lā* (web), which, however, can only § 77. be explained as prob. coming fr. *\*tex-la*, cf. *tex-ere* (weave).

Bef. *c*, *d* and *t* disappear in *hoc* for *\*hod-c*, *\*hod-ce*, cf. *quod*; *ac* for *\*at-c*, cf. *atque*.

Bef. sonant consonn. *s* disappears, thus e.g. bef. *n* in *pō-no* for *\*pos-no*, cf. *pos-ui*; *cē-na* for *\*ces-na*, cf. Umbr. *ces-na*; *penis* for *\*pes-nis*, cf. *πέος* for *\*πεσ-ος*, Sk. *pās-as*; in *penna* for earlier *pesna* the assimiln. has been kept, *pesna* stands for *\*pet-na* (v. c), *√pet*, *πετ*, Sk. *pat* (fly), cf. *prae-pet-es* (aues; Fest.), O.H.G. *fēd-ara*, *fēd-ah*, Gk. *πτ-ίλον*, *πτε-ρόν* (feather, wing), etc.

Bef. *m*, *s* is lost in *rē-mus* (oar), cf. *tri-resmus* (three-oared) Col. Rostr., *res-mus* stands for *\*ret-mus*, cf. *ῥ-ετ-μός*; *s* is lost without compensatory lengthening in *Cā-mēna* for *Cas-mena*, *√cas*, cf. *car-men*, Sk. *√śas*, *śās* (count, say).

Bef. *n* and *m*, *s* also becomes *r*. v. e.

Bef. *l*, *s* is lost in *corpu-lentus* for *\*corpus-lentus*, cf. *corpus*, *corpor-is*.

Bef. *d*, *s* is lost in, e.g. *iū-dex* for *\*iūs-dex*, *ī-dem* for *\*īs-dem*, *dī-duco* for *\*dis-duco*, etc., but it remains in *trans-dūco*, *trans-do*, bes. *trā-dūco*, *trā-do*, further in cases like *eius-dem*, *cuius-dam*.

Bef. *b*, also, *s* is lost, e.g. *tene-brae* for *tenēs-brac*, and the like : v. post.

Bef. *d*, *r* is lost with compensat. lengthening in *pēd-o*, *pōd-ex*, bes. *πέρδ-ω*, Sk. *√pard*, O.H.G. *farz*, Lith. *perd* (1 sg. pres. *pėrdzu*=*\*perd-yu*).

The change of *r* to *s* by assimiln. is well known, e.g. *rūsum*, *russum*, bes. *rur-sum*, *sū-sum* bes. *sur-sum*, *retrō-sum* bes. *retror-sum*, etc.

Bef. *sc*, consonn. are lost, prob. only to make pronunciation simpler and easier; thus in *dī-sco* for *\*dic-sco*, cf. *dī-dic-i*; *po-sco* (where *sc* became fixed, though origl. only in pres., cf. *po-posc-i*), prob. for *\*porc-sco*, cf. *√proc*, *prec*, in *proc-ax*, *proc-us*, *prec-or*, cf. Germ. *frāh*, *frag* (in Goth. *frāih-nan-*, N.H.G. *frag-en*); *mi-sco* for *\*mig-sco*, cf. *μῆγ-νυμι* (here, too, has the *sc* in Lat. grown into the root).

§ 77. Similarly *mis-tus* stands for *and* *bes. mics-tus, mix-tus*, and this prob. for *\*misc-tus*, cf. *misc-eo*; *tos-tus* for *\*tors-tus*, cf. *torr-eo* for *\*tors-eo*, Germ. *durs-t*, Sk.  $\sqrt{tar\check{s}}$  (thirst), i.e. *tars*, to which prob. belongs *tes-ta* (crock, jar) for *\*ters-ta* (lit. 'baked,' 'burnt'); cf. *terra* (dry land) for *\*ters-a*.

It is certain that certain groups composed of more consonn. were lightened by the evaporation (ejection) of one of these consonn.

Thus after *r*, *l*, are lost gutt. *c*, *g*, when folld. by *t* or *s*, e.g. *sar-tus* for *\*sarc-tus*, cf. *sarc-io*; *tor-tus* for *\*torc-tus*, cf. *torqu-eo*; *ul-tor* for *\*ulc-tor*, cf. *ulc-iscor*; *in-dul-tus* for *\*in-dulc-tus*, and this for *\*in-dulg-tus* fr. *in-dulg-eo*, and so others; *sar-si* for *\*sarc-si*, cf. *sarc-io*; *tor-si* for *\*torc-si*, cf. *torqu-eo*; *mul-si*, *mul-sus*, for *\*mulg-si*, *\*mulg-sus*, fr. *mulg-tus*, cf. *mulg-eo*; *spar-si* for *\*sparg-si*, *spar-sus* for *\*sparg-sus* fr. *sparg-tus*, cf. *sparg-o*, etc.; *par-simonia* for *\*parc-simonia* fr. *\*parc-timonia*, like the underlying fm. *par-sus* fr. *\*parc-tus*, cf. *par-o*; thus also *ursus* for *\*urcsus* fr. *\*urctus*, cf. Gk.  $\acute{\alpha}\rho\kappa\tau\omicron\varsigma$ , Sk.  $\acute{r}k\check{s}as$ .

On the other hand, *rcs* was tolerated *in fine*, in *arx*, *merx*.

Also the combinations *s-br*, *r-br* are avoided by the evaporation of the *s*, *r*, bef. *b*, e.g. *mulie-bris* for *\*mulier-bris* (or *\*mulies-bris*); *funie-bris* for *\*funes-bris* bes. *funer-a*, *funus*; *tene-brae* for *\*tenes-brae*, *\*temes-brae*, (§ 75, 2, n.); *fe-bris*, *he-bris*, for *\*fer-bris*,  $\sqrt{fer}$  (in *fer-uor*, etc.), origl. *ghar* (§ 73, 1; Corss. Krit. Beitr. 204 sqq.; Ebel, Zeitschr. xiv. 78; cf. L. Meyer, Comp. Gr. ii. 235, 241). Similarly in above-mentioned *tos-tus* for *\*tors-tus*, etc.

*Quintus* for *Quinc-tus* is late, cf. common *Quinc-tius* bes. later *Quin-tius*; the same holds good in *au-tor* for *auc-tor* fr. *\*aug-tor*, etc. Yet it cannot be doubted that *c* was lost bef. *t* sporadically even at an earlier period of the lang. in such cases as *in-uītus* fr. *\*in-uic-(i)-tus*,  $\sqrt{uic}$ , *uec*, Gk.  $\text{ἑκ-ών}$ , Sk. *vaç*, i.e. *vak* (will): *in-uī-tare* fr. *\*in-uic-(i)-tare*,  $\sqrt{uic}$ , *uec*, *uoc* (*uoc-are*), Gk.  $\text{ἑπ}$ , Sk. *vak*, origl. *vak* (speak), etc. (cf. Corss. Krit. B. p. 4 sqq., and Krit. N. p. 47 sqq. where other views, however, are expressed). Also *Vitoria*, *Vitorius*, are supported

by inserr. as by-forms of *Victorius*, -a (Corss. Krit. N. p. 45 § 77. sqq.). v. another explanation of *invitare*, etc., in § 39, 2.

b. Complete assimiln. of following to foregoing consonn. This branch of assimiln. is well represented in Lat.; thus e.g. *t* of superl. termn. -*timu-s* (origl. and Sk. -*tama-s*, retained in *op-timus*) is assimild. to *s* in -*is-simus* = \**is-timus*; *is*, the shortest fm. of origl. -*yans*, which is in Lat. *iōs*, *iōr*, *ius*, is accordingly the compar.-sf. to which the superl. is added, e.g. *longis-simus* fr. \**longis-timus*; so too *t* of -*timus* becomes assimild. to *r* and *l* in those superll. which are fmd. fr. an unraised adj.-stem, e.g. *celer-rimus* fr. \**celer-timu-s*, \**facil-limus* fr. \**facil-tumu-s*, etc., unless these superll. stand (as G. Curt. conjectures in a letter) for \**celer-is-timus*, \**facil-is-timus*, \**celerstimus*, \**facilstimus*, \**celersimus*, \**facilsimus*.

*s* is assimild. to *r* in *torr-eo* for \**tors-co* bes. *tos-tu-m* for \**tors-tu-m*, *terra* for \**ters-a*, origl. √*tars* (be dry), as in Germ. *dürr-e* bes. *durs-t*; *fer-rem*, *uel-lem*, are fr. \**fer-sem*, \**uel-sem*, cf. *ama-rem* for \**ama-sem*, *fac-sem*, etc. (cf. Corss. Krit. B. 402 sqq.).

Perh. *y* has become similar to the preceding consonn. in pres. fms. with doubled root-termns., as *pello*, *fallo*, *curro*, *mitto*, etc., though the combinations *lio*, *rio*, *tio*, are ordinary (v. pres.-st.).

*v* seems assimild. to preceding *l* in *pallor*, *pallidus*, for \**pal-uor*, \**pal-uidus*, cf. O.H.G. *falo*, *falaw-er*, *fahw-er*, Lith. and f.f. *pālva-s* (fallow—of deer); *mollis*, prob. fr. \**molvis*, \**moldv-is*, = Sk. *mrdū-s*, f.f. *mardu-s*; *sollu-s* (totus) equal to *saluo-s*, Sk. *sārva-s*, Gk. *δλος* for \**δλFos*. In these double fms. (*sollus*:*saluos*::*pello*:*alius*) we must prob. recognize traces of a mixture of dialects.

*t* after *s* becomes assimild. to it, in *ensor*, *census*, √*cens*+*ssf*. -*tor-*, -*tu-*, cf. Osk. *cens-tur*, *cens-tom* = *censum*. Moreover, assimiln. of *t* to foregoing *s* occurs in the many cases where fr. *d*, *t*+*t* arise (subsequently *st*, cf. 2, Dissimiln.); after short vowels the doubling is expressed in writing as well, after long vowels, and after consonn. we find regularly only one *s*; yet we find by their side spellings such as *fussus*, *cassus*, *diuissio*, *rissus*, etc.,—which have therefore a good foundation in the lang.,—

§ 77. e.g. *fissus* fr. \**fid-tus*, \**fis-tus*, √*fid* in *findo*, *fid-i*; *gressu-s* fr. \**gred-tu-s*, \**gres-tu-s*, cf. *grad-i-or*; *fossa* fr. \**fos-ta*, \**fod-ta*, √*fod* in *fod-io*; *passus* fr. \**pat-tu-s*, \**pas-tu-s*, cf. *pat-i-or*; *ēsum* for \**essum*, which we might have expected, fr. \**ēd-tu-m*, \**es-tu-m*, cf. *ēd-o*; *clausus* fr. \**claud-tu-s*, \**claus-tu-s*, cf. *claud-o*; *ūsus* (rarely *ussus*, *inserr.*) fr. \**ūt-tu-s*, \**ūs-tu-s*, cf. *oit-ier*, *ūt-i*; *tonsu-s* fr. \**tond-tu-s*, \**tons-tu-s*, cf. *tond-eo*; *uicensumus*, *uicēsumus*, fr. \**uicent-tumu-s*, \**uicens-tumu-s* (unless here, as in *decimu-s*, only *mo* was added, in which case the fm. would be \**uiginti-mu-s*); *uersus*, *uorsus*, for \**uers-tus*, \**uors-tus*, fr. \**uert-tus*, \**uort-tus* (*uert-ere*), etc. On this Sound-law, cf. Corss. Krit. B. 418 sqq.

c. Partial assimiln. of foregoing to follg. consonn.

It is well known that bef. mutes mom. sonant consonn. become mute; e.g. *ac-tus* for \**ag-tus*, cf. *ag-o*; *scrip-tus*, *scrip-si*, for \**scrib-tus*, \**scrib-si*, cf. *scrib-o*, etc.; in *uec-tus* bes. *ueh-o*, origl. *vagh-āmi*, we must assume a representation of origl. *gh* by Lat. *g*: origl. *vagh-ta-s*, Lat. \**ueg-to-s*, *ucc-tu-s*. On the other hand, *sec-are*, *salic-em*, stand bes. *seg-mentum*, *salig-nus*, etc.; the sonant consonn. *m*, *n*, here change *c* to son. *g*.

Lab. moment. consonn. pass into their nasals bef. *n*: *som-nus*, *Sam-nium*, for \**sop-nus*, \**Sab-nium* (cf. *sop-ire*, *Sab-īni*, *Sab-elli*).

The earlier lang. still shows *s* bef. nasals, softened fr. *t*, as *res-mu-s* (*rēmus*) fr. \**ret-mu-s* (*ē-per-mó-s*); *pes-na* (*penna*) fr. \**pet-na* (√*pet*, fly, v. a).

*Quadra-ginta* bes. *quatri-duo* is peculiar; *t* bef. sonant *r* has become *d*.

From origl. *tr* in Lat. there have arisen sometimes \**thr*, *dhr*, *br*, through the aspirating force of the *r* (v. supr. Gk., also Zend), (on *b* as a representative of origl. *dh*, v. § 73, 2), e.g. *consobrinus* (cousin) for \**sosbrinus* (*s* bef. *b* is lost regularly, v. sup.), and this for \**sosdhrinus*, \**sosthrinus*, \**sostrinus*, fr. \**sostor-īnu-s*, st. \**sos-tor-*, usu. \**sosor-*, *soror-* (sister); *salūbris* fr. \**salus-bris*, and this for \**salus-dhris*, \**salus-thris*, \**salus-tris*, \**salut-tris* (*salus*, *salut-is*). Cf. Ebel, Zeitschr. xiv. 78; Kuhn, Zeitschr. xiv. 222, xv. 238. On the other hand, Cors. Krit. N. p. 186 sqq.

d. Partial assimilation of following to foregoing § 77. consonants. This takes place esp. in the case of *t*, which, after nasals and liquids, commonly changes into spir. *s*; the same tendency is seen after gutt. (after *c*),—the latter occurs also in Sk. (v. § 52, 2, n. 2); e.g. *man-sum* for *\*man-tu-m* (*man-eo*); in *Leu-cesie*—important on acct. of *eu*, v. § 36—(voc.; title of Iuppiter) for *\*leucetie*, fr. *\*Leucentie*, cf. *Leucetios*, *Loucetios*, for *\*leucent-ios*, *\*loucent-ios*, further fmm. fr. *\*leucent-*, *loucent-*, pres. part. act. fr. *\*leuc-o*, *\*louc-o*, f.f. *rauk-āmi*, *√luc*, origl. *rulk* (Corss. Krit. B. 471); *t* has become *s* after origl. *n*, which afterwards was lost, in the same way; *pul-su-s* for *\*pul-tu-s* (*pel-lo*, *pe-pul-i*), *spar-sus* for *\*spar(g)-tu-s* (*sparg-o*), etc.; but by their side occur *ten-tu-s* (and *ten-su-s*), *sepul-tu-s* (*sepel-io*), *tor-tu-s* for *\*tor(c)-tu-s*, (*torqu-eo*), etc.; *\*mac-simu-s* thus is for *\*mag-timu-s* (*mag-nus*; cf. *op-timu-s*); *fixus*, i.e. *fic-su-s*, for *\*fig-tu-s* (*figo*); *noxā*, i.e. *\*noc-sa*, for *\*noc-ta* (*noc-eo*), etc., bes. *ac-tu-s* (*ag-o*), *fic-tu-s* (*√fig* in *fi-n-g-o*), and many others with retained *t*.

Regularly *t* does not pass into *s* after *n*, when *nt* belongs to one and the same word-formative particle, e.g. *feru-nt*, *ferē-nt-em*, etc. (yet cf. above-mentioned *Leuccsios* for *\*Leucentios*).

*Lapsus* for *\*lap-tu-s*, *\*lab-tu-s*, is singular (cf. *lab-i*), bes. *scrip-tu-s* (*scrib-ere*), cf. Corss. Krit. B. 420 sqq. (Ebel, Zeitschr. xiv. 245 sqq. here assumes an inserted *s*: *\*lap-stus*, *\*man-stum*, to which *t* was assimild.)

*Note*.—Yet *mend-ax* belongs prob. to *ment-iri*, according to the system laid down by Schuchardt, *Vocalismus des vulgärlateins*, Lpz. 1866; cf. however on this point Aufrecht in *Zeitschr.* ix. 232; Corss. Krit. B. 117 sqq.

e. Change of *s* to *r* betw. vowels, or betw. vowels and sonant consonn., also after vowels in termination (in the lang. in question). The sonant consonn. here change the mute *s* into sonant *r*. The same process takes place, e.g. in Germ. also (*war*, *wāren*, for *was*, *wāsen*, *√was*, cf. *ge-wēs-en*, etc.), and in Sk. So, e.g. in *gener-is* (genus) for old Lat. *\*genes-os*; *maiores* fr. *\*maioses*; *erat* fr. *\*esat*, *√es*, etc.;

§ 77. *ueter-nus* fr. \**uetes-nus* (*uctus*, *ueter-is*); *car-men* fr. \**cas-men*, cf. Old-Lat. *Cas-mena*, √*cas*; *diur-nus*, *ho-dier-nus*, from an otherwise lost st. \**dios*-, \**dies*- = origl. *divas* (in *dies*, *diei*, the final *s* of the root has been lost), etc.; *arbor* for earlier *arbos*; *amor* fr. \**amos*, \**amo-se*, etc. In *fine* this *r* for *s* is caused through analogy of the other fms. (*arbor-is*, *amar-is*). Betw. vowels *s* has remained but rarely, e.g. *nasus*, cf. Sk. *nas*, Sl. *nosŭ*, etc., *miser*, *uasa*, *posui*; regularly *s* only remains instead of *ss*, e.g. *casus* for *cassus* fr. \**cad-tu-s*, etc. (v. b).

f. Loss of consonn. betw. vowels. Here too we see a kind of assimilation, in that sonant consonn. become thereby similar to the surrounding vowels, and are swallowed up by them, so that only the attendant accent remains.

In the Romance langg. this process is very common (e.g. *ducatus*, It. *ducato*, Sp. *ducado*, Fr. *duché*). The commonest case is the loss of *y* and *v*, as *monco*, *monēs*, fr. \**moncoyo*, \**moneyis*, f.f. *mānayāmi*, *mānayasi*; *amasti* fr. \**amaisti*, *amausti*; *fluont*, *fluunt*, fr. *flouont*, etc. Exceptionally *s* has been lost betw. two vowels (Corss. Krit. Beitr. 464 sqq.), thus e.g. in *uēr* (spring) fr. \**veser*, cf. Gk. *ἔαρ* for \**Feσap*, Lith. *vasarà* (summer), Sk. *vas-antā-s* (spring), O. Bulg. *ves-na*; *uīs*, *uim*, bes. *uires*, *uirium*, st. *uisi-*, *uiri-*; prob. through analogy fr. origl. \**divas*- arose a fm. *diēs*, *diēi*, bes. *ho-dier-nus*, fr. \**dives-no-s*; fr. origl. and Sk. *nābhas-*, *nūbēs*, *nūbi-s*; fr. origl. and Sk. *sadas-* (cf. Gk. *ἔδος*), *sēdēs*, *sēdi-s*, and other like forms. Further, loss of origl. *bh*, Lat. *f*, *b*, has certainly occurred in *ama-ui* for \**ama-fui*, etc.; in dat. pl. e.g. *equīs*, f.f. *akva-bhya(m)s* (v. § 73, 3). On the doubtful loss of *c* betw. vowels, cf. § 39, 2; § 77, a, sub fin.; on loss of *h*, cf. § 73, 1.

g. Evident insertion of conson. betw. concurrent consonn. The change fr. *m* to *mp*, for the accommodation of *m* to the follg. *s*, *t*, is well known; it occurs in the best MSS. (e.g. in Cod. Medic. Vergili), e.g. *hiem-p-s*, *sum-p-si*, *sum-p-tus*, etc. Bef. the *s*, *t*, *m* became an audible conclusion, i.e. changed to *mp*.

## 2. Dissimilation.

*t*, *d*, before follg. *t*, change into *s* (as in Zend, Gk., Sl.-Germ.),

e.g. *eques-ter*, *pedes-ter*, for \**equet-ter*, \**pedet-ter*, cf. *equit-is*, § 77. *pedit-is*; *es-t*, *es-tis*, for \**ed-t*, \**ed-tis*, cf. *ed-o*; *claus-trum* for \**claud-trum*, cf. *claud-o*; st. *potēs-tāti-* (*potestas*) for \**potens-tāti-* fr. \**potent-tāti-*, st. *potent-* (*potens*) + sf. *-tāti-*, etc.

Likewise through the striving after dissimiln. *-āli-s* is interchanged with *-āri-s*; the latter is found in those cases where the word-st. to which this secondary sf. is added contains an *l*, e.g. *mor-tali-s*, but *uolg-ari-s*, *popul-ari-s*, *epul-ari-s*.

In the dislike of the immediate succession of two like sounds is found also the cause of the contraction of two like or similar consonn., which are separated by only one vowel, into one, through evanescence of the intervening vowel (cf. Glk. § 68, 2; a similar phenom. in M.H.G. has been mentioned by me in Kuhn's Zeitschr. x. 160); thus *consuētūdo* for \**consuēti-tūdo* (*con-suētu-s*), st. *aestāti-* for \**aestitāti-* (*aestu-s*), st. *nūtrīc-* for *nūtri-trīc-* (*nutri-re*), *stipendium* for \**stipi-pendium* (*stip-s*, *stip-is*), *uenēficus* for \**uenēni-ficus* (*uenēnu-m*), etc. (L. Meyer. Comp. Gr. i. 281).

## INITIAL.

§ 78.

In Lat. more than in the other kindred langg., where loss of initial consonn. occurs in the main only sporadically, initial consonn. are exposed to evaporation: of two initial consonn. the former often falls away, yet even one single conson. is found to disappear bef. a follg. vowel (*c* bef. *u*).

Thus no Lat. word begins with *sn*, *sm*, *sr*; where these combinations origl. occurred initially, the *s* is lost, and only the second conson. remains, e.g. *nix*, *niuis*, fr. \**snig-s*, \**snigv-is* (v. supr. § 72, 1), cf. Zend √*çniž* (snow), O. Bulg. *sněg-ŭ* (snow), Lith. *snig-ti* (snow, v.), *snėg-as* (snow, n.), Goth. *snair-s* (snow); *nurus* (daughter-in-law) fr. \**snurus*, cf. O.H.G. *snur*, Sk. *snušā*, *me-mor* (mindful) fr. \**sme-mor* (cf. *spo-pond-i*, *ste-ti* for \**ste-sti*, etc.), and this fr. \**sme-smor*, as Sk. and origl. √*smar* (bethink; on √*flu*=origl. *sru*, v. § 71, 3 n.).

Neither does initial *vr*, *vl*, occur in Lat., e.g. *laqueus* (noose), cf. Goth. *vruggō* (sling), \**vriggan* (wring, wind); *lacer* (torn),

§ 78. cf. *ῥάκος* (rag), Aiol. *βράκος*, i.e. *ῥράκος*, Sk. *√vraçk-*, i.e. *vraçk* (tear); *radix* (root), cf. *ρίζα*, Lesb. *βρίσδα*, i.e. *φρίζα*, \**φριδ-ya*, Goth. *vairts* (root), O.H.G. *wurza*, *wurzala*, f.f. of root therefore=*vrad*, etc.

Bef. *f*, *s* has disappeared in *fallere* (deceive) bes. *σφάλλειν*, *fungus* (id.) bes. *σφόγγος*, *funda* (sling) bes. *σφενδόνη*, *fides* (lyre) bes. *σφίδη*; on the conjectured loss of *s* bef. *p*, *v*. Corss. Krit. B. 457.

More singular, on the other hand, are cases like *teg-o* (cover) for \**steg-o*, cf. *i-steg-a* for \**in-steg-a* (cover), Gk. *στέγ-ω*, *στέγ-η*, bes. *τέγ-η*, Lith. *stogas* (roof), in Germ. likewise the *s* is lost, cf. *deck-en*, *dach*; *tundo* (thump), *√tud*, bes. Goth. *stauta*, *√stut*, but Sk. *√tud*; *taurus* (bull), *ταῦρος*, O. Bulg. *turǔ*, but Goth. *stiur*, Sk. *sthūra-s*; *cau-ere* (beware) bes. Goth. *us-skav-yan* (be wakeful), origl. *√skav*, etc.; bes. freq. initial *st*, *sc*. Whilst, inversely, of *sc* only the *s* remains in *sirpeus* (rush—), *sirpea*, *sirpiculus*, *-la*, (junket), *sirpare* (bind), bes. *scirpus* (withe), *scirpeus*, *scirpea*, etc., cf. O.H.G. *scilaf*, *sciluf*, N.H.G. *schilf*, and perh. in some others (Corss. Krit. B. 31 sqq.). Also in *lā-tum* for \**tlātum*, cf. *√tol* (tollo), init. *t* is lost. *p* bef. *l* has clearly been lost in *lien* (milt) bes. Sk. *plihán-*, *plihán*, *σπλήν*; perh. in *lanx*, *lanc-is* (dish), bes. *πλάξ*, *πλακ-ός* (flat-, plate), O.H.G. *flah*; whether *lae-tus* (glad) is for \**plai-to-s*, and belongs to Sk. *√pri* (love, cheer), *lau* in *lau-ere*, *lauare* (wash), stands for \**plav*, and here a causative fmn. of *√plu* is seen, may seem doubtful (*lau* belongs prob. to same root as *luo*, and not to root *plu*). Upon loss of *c* bef. *l*, which is not yet beyond doubt in my opinion, cf. Corss. Krit. B. p. 2 sqq., Krit. N. p. 35 sqq. On the whole there is still considerable doubt and uncertainty in this branch, because we are confined to a few examples.

It is well known that it was not till historic times that men simplified *gn* into *n*, as e.g. in *nō-sco*, *nō-tus*, *nō-men*, fr. older *gnō-sco*, cf. *co-gnō-sco*, *gnō-tus*, *gnō-men*, cf. *co-gnō-men*; *narrare* fr. earlier *gnā-rigare*, from same *gnā-rus*, where the initial conson. is fully preserved, fr. same root as *gnō-sco*, origl. *gna* fr. *gan* (nosse: cf. *γι-γνώ-σκω*, Sk. *ज्ञा*, Germ. *kan* and *kna*, etc.):



*nā-tus* for earlier *gnā-tus*, preserved in *co-gnā-tus*,  $\sqrt{gna}$  fr. *gan* § 78. (*gignere*), cf. *gen-us*. The same sound-law, by which an initial gutt. + *n* becomes *n*, occurs also in Eng.: the old initials *gn*, *kn*, are still noticeably written in Eng. of this day, in words like *gnat*, *gnaw*, *knowledge*, etc., but *g*, *k*, are no longer heard. Cf. loss of gutt. bef. nasals medially (§ 77, 1, a).

Similarly at a later period of the lang. *st* was lost before *l* (Corss. Krit. B. 461, cf. 149) in *st.leiti-*, *sleiti-*, *leiti-*, *liti-* (*lis*, suit), bes. which we place O.H.G. *strit*, N.H.G. *streit* (in *st-* terminations, it is true, this does not occur in Lat. words), in Inscr. *slis* is seen, *sl* thus becomes *l* through *sl*: *stlātu-s*, *lātu-s* (broad), which is derived from origl.  $\sqrt{star}$  (*ster-no*, *strā-tus*, *σπορ-έννυμι*, etc.)—thus the origl. word means “spread”; *stlocu-s*, *locu-s* (place), which we refer to Sk.  $\sqrt{stha}$ , further fm. of *stha*, origl.  $\sqrt{sta}$  (stand), and others whose derivation is not quite clear.

As *suāuis* for \**suaduis* (§ 77, 1, a), so *uiginti* for \**duiginti*, cf. *duo*, Sk. *dva*; the dropping away of the *d* occurs nevertheless in Gk. too (εἰκοσι), in Kelt. (Erse *fiche*, *fichet*, i.e. *uiginti*), in Aryan (Sk. *vīçāti*, Zend *vīçaiti*), and thus dates from the earliest times. If \**duiginti* had stood its ground to a later time, \**biginti* would have arisen, as *bis* fr. \**duis*, *bellum* fr. *duellum*, *bonus* fr. *duonus* (*duonoro*; Epit. Scip. Barb. f.): here through mutual influence *b* has arisen, as an assimiln. of *d* and *v*, since *d* became assimilated to *v* as regards quality (labial quality), and *v* became like *d* as regards quantity, i.e. became a momentary sonant conson.

Bef. *y*, *d* is lost in *Iouis*, etc., for \**Dyouis*, cf. Old Lat. *Dioue* (Ioui), and Osk. *Diūveī* (Momms. Unterital. Diall. p. 255), Sk. *dyāu-s* (heaven), Gk. Ζεύς = \**dyev-s*, etc.,  $\sqrt{dya}$  (= *div*, shine). The same loss is seen in *Iuno* for \**Diou-no*, fmd. fr. same root (Corss. Krit. N. p. 142).

Even the favourite initial sound *qu* appears simplified to *u* in *uermis* (cf. Germ. *wurm*) for \**quermis*, f.f. *karmi-s*, Sk. *krmi-s*, Lith. *kirm-elė* (worm; but cf. G. Curt. Gr. Et.<sup>2</sup> p. 485 sqq.);

§ 78. so too *v* appears to stand for *gv* in  $\sqrt{uen}$  (uenire)=\**guen* for \**ge-n* (§ 77, 1), further fmn. fr.  $\sqrt{ga}$  (go), by means of *n*. At a very late period arose the loss of init. *c* bef. *u* in several fms. of interrog. pronn., e.g. in *u-bi* for \**cu-bi* or \**quo-bi*, kept in compd. *ali-cu-bi*, cf. Umbr. *pufe* (*p*=Lat. *c*); *u-nde* for \**cu-nde*, kept in *ali-cu-nde*; *u-ter* for \**cu-ter* (compar. fm. st. *cu*=*quo*-), cf. Osk. *piturus-pid* (i.e. utrique) with *p*=Lat. *c*, Gk. *πότερος*, earlier Iôn. *κότερος*, Sk. and f.f. *ka-tarás*.

§ 79.

### FINAL.

The Lat. lang., as we have it, generally permits only single consonn. at the end of a word, but also groups of two and even three consonn., viz. nasal or liq. + mutes; mutes, *r*, *l*, *m*, *n* + *s*; *s* + *t*, e.g. *ferunt*, *hunc*, *uolt*, *fert*; *scrobs*, *ars* for \**art-s*, and so in similar cases (but *uir* for \**uirs*, *quatuor* for \**quatuors*, fr. \**uiro-s*, *quatuor-es*), *fers* (fr. *feris*), *puls* for \**pult-s* (but *uis* for \**uil-s*, f.f. *varsi*, "thou wilt," *sal* for \**sal-s*, *s* lost), *hiem(p)s*, *ferens* for \**ferent-s*, and so in such cases (but *nouōs*, *nouās*, for \**nouons*, \**nouans*); the combinations *rs*, *ls*, *ns*, were therefore tolerated in these cases where they stand for *rts*, *lts*, *nts*, i.e. when *s* alone = *ss*; *est*; nasal or liq. + mute + *s*, e.g. *hiemps*, *urbs*, *arx*, i.e. *arc-s*, *falx*, i.e. \**falcs*; indeed our present final consonn., for by far the greatest part, did not become final until vowels had evaporated, and were not compressed until vowels had been lost. Yet in no case was a doubled conson. tolerated, in *fine*, e.g. *os*, *fel*, not \**oss*, \**fell*, cf. *oss-is*, *fell-is*; moreover, the combination of two mom. consonn. was not admissible, e.g. *lac* for \**lact*, cf. *lact-is*, and *rd*, *cor* for \**cord*, cf. *cord-is*; where these combinations should have been final, the latter conson. was discarded.

It was not until Lat. became a fixed written language in classical times that the termn. assumed a more definite existence. The earlier national archaic lang. shows in spelling a great indifference towards final consonn. In fact, the consonantal termns. *s*, *m*, *t*, important as they are for word-formn., were sometimes expressed in writing, sometimes omitted, which

we find to be the case in Umbr. also. This fact proves that in § 79. earlier times (and later also in the unformed branch of the Roman) the final consonn. were heard with difficulty, perh. as in many Romance langg. (e.g. *d* in Span., *t*, *nt*, etc., in Fr.). The correct lang. here introduced a fixed rule, after the pattern of the Gk.; the conson. was now either always written (the rule), or regularly discarded (the exception). A few exx. of the unsettled treatment of the termn. have remained in spelling even as late as the classical period.

We will treat separately of the final consonants, origl. *s*, *m*, *t*, since they are most important for grammar.

*s* is omitted in writing in the oldest inserr. in cases like *Tetio*, *Furio*, n. sg. for *Tetio-s*, *Furio-s*; *Corneli*, *Clodi*, etc., for *Cornelis*, *Clodis* = *Cornelios*, *Clodios* (Ritschl, Progr. of 12 March, 1861). Yet in the earliest lang. the loss of final *s* is mainly confined to n. sg. It is well known that even at a later time the poets were wont to neglect final *s* bef. initial consonn., and that the weak pronunciation of final *s* is otherwise attested. The written lang. in most cases decided in favour of the retention of the *s*. Nevertheless the wavering betw. retention and loss of final *s* in 2 p. sg. med. is obvious, e.g. *amabaris*, *amabare*; further in *magi-s* and *mage*, *poti-s*, *pote*, where, at the same time *i* was dulled to *e*.

The loss of *s* was regularly allowed, e.g. in n. pl. masc. of *o*-st., which in the older lang. still shows the *s* here and there, e.g. *heis*, *magistreis*, etc., bes. *hei*, *magistrei*; a later fin., as *hi*, *magistri*, was the one afterwards exclusively fixed upon; the same process takes place in gen. sg. fem. of *a*-stems, e.g. *suaes*, *dimidiaes*, later *ae* only is found, etc.

Through evaporation of the vowel of the last syll. *s* after *r* is lost, as in *puer*, *uir*, *quatuor*, *acer* (with auxil. vowel bef. *r*), for \**pueros*, \**uiros*, \**quatuores* (cf. τέσσαρες), *acris*; more rarely this occurs after *l*, *uigil* for *uigilis*, \**uigils*.

*m*, only faintly audible in *fine*, is likewise often unexpressed in earlier monuments of the lang., e.g. *oino*, *wiro*, *duonoro* (Erit.

§ 79. Scip.), bes. *pocolom*, *sacrom*, etc. In popular diall. this faint pronunciation of final *s* remains, as later inserr. prove; the written lang., however, firmly maintained the letter in spelling. One effect of the weak pronunciation of final *m* must here be noticed, viz. that in verse it was not considered a conson. bef. vowels.

Also final *n* seems to have become only faintly heard, cf. *alioqui* bes. *alioquin* and the like (cf. however, Corss. Krit. B. 272).

Origl. final *t* had in earlier Lat. a weak sound, like a scarcely audible *d*; accordingly it is freq. omitted in writing, e.g. *patre* (Epit. Scip. Barb.) bes. *Gnainuod*, etc. In classical Lat. *d* for origl. *t* was sometimes retained in writing, thus e.g. in ntr. pronl. decl. e.g. *quo-d*=origl. *ka-t*, *id*=origl. *i-t*, etc. (the spelling in *t* is rarer in these cases), sometimes completely discarded, as in abl. sg., where *d*=origl. *t* has been retained in archaic Lat. only, but was not written in class. Lat., e.g. *equō-d*, *equō*=origl. *akvā-t*, Sk. *ācvā-t*; in termn. *-to* of imper. *t* has likewise been lost, e.g. origl. *as-tāt*, Osk. *es-tūd*, Lat. *esto* fr. *\*es-tōd*. Final *t* in Lat. is not origl., but has become final after vowel-loss, and thus remains in class. Lat., whilst archaic Lat. does not show this *t*, e.g. *īt*, f.f. *\*ei-ti*, origl. *ai-ti*; *uehit(i)*, *uehunt(i)*, *\*uehonti*, origl. *vaghati*, *vaghanti*, etc., but archaically *dede*=*dedet*, *dedit*, and even indeed *dedro*=*dedront*, *dederunt*.

Thus *nt* also in earlier times and colloquial lang. was barely audible in pronunciation; wherein lies the cause of the double fms. of the later fixed spelling of 3 p. pl. pf., as *fecerunt* (with entire termn. retained) and *fecere* (with lost *nt* and weakened vowel).

The clipping of final consonn. was even more prevalent in Umbr. than in Old Lat.; whilst the Osk. does not show this phenomenon, since there was a generally-received Samnite orthography before the time from which our earliest inserr. date, and the popular variations in pronunciation were no longer followed in spelling.

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